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ABSTRACT

GRADES OR AGES: Grade 2. SUBJECT MATTER: Reading, language arts, spelling, writing, literature, arithmetic, social studies, science, health, art, physical education. ORGANIZATION AND PHYSICAL APPEARANCE: In addition to a chapter on each of the subjects covered, the guide includes a suggested weekly time allotment and daily program, and an appendix listing resource materials. The guide is mimeographed and spiral bound with a soft cover. OBJECTIVES AND ACTIVITIES: Objectives are listed in detail in each chapter, and activities for each subject are also given in considerable detail. The activities for the art lessons are set out in chart form. INSTRUCTIONAL MATERIALS: Texts and other materials needed are listed in each chapter. The appendix contains information on films and filmstrips, a children's bibliography, and a general bibliography. STUDENT ASSESSMENT: No specific provisions are made for evaluation. (MBM)

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CHEYENNE PUBLIC SCHOOLS
CHEYENNE, WYOMING

GUIDEBOOK

SECOND GRADE

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SP007164

FOREWORD

Committees of teachers, special personnel and principals worked diligently to develop this guidebook. It serves a definite purpose to help teachers who are starting their teaching, and also for those who have had extensive experience. It does not dictate the methods or the speed of teaching in any one subject. Teaching is an art and a science, which means teachers must have some choice in their materials and methods. The guidebook was developed to fulfill these needs.

After these study guides were in use for a number of years, the idea was conceived to develop enrichment materials in mathematics and science. These booklets were originally published separately and made available to teachers. It was the wish of many elementary teachers that these materials be incorporated in a regular guidebook for greater convenience to the teacher.

I am taking this opportunity to thank all of those who have contributed to this publication, and who have thus made education a little more vital.

L. D. Crane
Superintendent of Schools

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SUGGESTED WEEKLY TIME ALLOTMENT
MINUTES PER WEEK
SECOND GRADE

Subject	Minutes Per Week
Reading and Phonics	675
Organization, Physical Education, and Recess	200
Language, Writing, Spelling, and Literature	225
Social Studies	125
Science, Health and Safety, Art	100
Music	100
Arithmetic	150
Total	1,575

SUGGESTED DAILY PROGRAM

Organization (opening, planning period)	9:00 - 9:15
Reading and Phonics Group C	9:15 - 9:40
Reading and Phonics Group B	9:40 - 10:05
Recess	10:05 - 10:20
Reading and Phonics Group A	10:20 - 10:45
Science (Monday, Tuesday),Health (Weds., Thurs.) Art (Fri.)	10:45 - 11:05
Spelling and Writing	11:05 - 11:35
Social Studies	11:35 - 12:00
Arithmetic	1:00 - 1:30
Reading Groups C and B (17 minutes each)	1:30 - 2:05
Recess	2:05 - 2:20
Reading Group A	2:20 - 2:40
Music	2:40 - 3:00
Language and Literature	3:00 - 3:15

*Note: While one group is having guided reading or related practice with the teacher, the other groups are engaged in independent reading activities involving:

The use of reading workbooks.
The use of graded supplementary readers and library books.

READING

The second grade is the beginning of the extensive reading program. Much careful work must be accomplished. Make your grouping flexible so that children may be moved from group to group as the need arises. The slow group should be the smallest. Know your guide books well and use them wisely. They are not crutches but source books, so consult them and follow the plans exactly. Stick to the orderly use of the books of your series, workbooks and all, for your basic program.

Classroom environment is important in developing a good reading program. Here are a few suggestions:

Is there something new on the bulletin board?
Are reading materials attractively displayed?
Are individual needs considered in providing reading materials?
Are many types of materials in evidence?
Are there references in science, health, safety, and social studies?

Reading Tests

In order to make a very thorough and definite check in all phases of the reading program, a basic reading test should be given at the completion of each book, Friends and Neighbors, More Friends and Neighbors, which will be two for the year.

Standardized reading tests will be given in the spring.

Seatwork

There are always two phases in the instructional type of reading carried on in the classroom; that which the teacher and pupils work together to attain, and the activities have a definite function in a well balanced program. Use of workbooks, Think and Do 2-1 and 2-2, and seatwork skillfully planned in close accord with the activities of the class. Hectograph and mimeograph materials may be used. Check all seat work carefully with the student.

Skills to be Developed

- Proper care of books.
- Correct eye movements.
- Smoothing phrasing.
- Good habits of work recognition.
    - Phonetic analysis.
    - Contextual clues.
    - Noting general form of words (structural analysis).
- Silent reading without lip movement.
- Finding answers to questions.
- Clear enunciation and correct pronunciation.

An appreciation for good reading.
Story telling and dramatization from good reading.
Sequence of story events.

PRIMARY READING
LEVEL I
READING READINESS

Basic Text

Ginn Basic Readers - Games to Play - Revised Edition

Supplementary Texts

Getting Ready - Houghton Mifflin
Fun with Tom and Betty - Ginn
Before We Read; We Read Pictures; We Read More Pictures - Gray
Growing Into Reading; Your Child Learns to Read - Teacher's Reference
Scott, Foresman and Company
Come and See; Come and Hear - Follett

Objectives

1. General objectives
   - a. Orientation
   - b. Language growth
   - c. Concepts
   - d. Visual discrimination
   - e. Auditory perception and speech training
   - f. Vocabulary building
   - g. Kinesthetic development
   - h. Diagnoses of individual abilities
     - (1) Language Maturity
     - (2) Personal and social maturity
     - (3) Health records, age
     - (4) Tests
2. Grouping policy
   - a. Nine weeks with class as a whole
   - b. Observations by teacher
   - c. Individual abilities
   - d. Conferences with parents

Auditory and Visual Skills

1. Skills to be developed
   - a. Auditory discrimination of rhyming elements
   - b. Auditory discrimination of word beginnings
   - c. Auditory discrimination of word endings
   - d. Auditory and visual recognition of letters
   - e. Visual discrimination of word forms
   - f. Visual memory

Word Analysis

1. Understanding
    a. Likenesses and differences
    b. Left and right concept
    c. First and last
    d. Above and below
    e. Large and small
    f. Over and under

2. Learning letter names (not in alphabetical order)

3. Naming basic colors

4. Number concept through ten

Comprehension and Interpretation

1. Understanding meanings
2. Following oral directions
3. Expressing ideas
4. Listening to stories
5. Anticipating what will happen next in a story
6. Retelling a story; keeping the sequence of the story
7. Understanding the feelings of the story characters
8. Telling picture stories
9. Experience charts

Manipulative Skills

1. Using scissors
2. Using crayolas
3. Using pencils
4. Handling books

LEVEL II
PRE-PRIMER

Basic Text

We Look and See; We Work and Play; We Come and Go - Scott, Foresman

Supplementary Texts

Skip Along; Under the Sky; Open the Door; High on a Hill - Row, Peterson
Tip; Tip and Mitten; The Big Show - Houghton Mifflin
Guess Who - Scott, Foresman

Supplementary Materials

Come and Hear cards to accompany Come and Hear - Follett
Come and See cards to accompany Come and See - Follett

Objectives

1. Maintenance of Level I Skills.
2. Teach 58 sight words.

Auditory and Visual Skills

1. Matching similar objects
   a. Pictures
   b. Letters
   c. Words
   d. Phrases
   e. Sentences

2. Establishing sight vocabulary

3. Learning correspondence between printed and spoken word

4. Comparing printed word and manuscript writing

5. Forming images
   a. Visual
   b. Auditory

6. Basing memory
   a. Observation
   b. Visualization
   c. Sequence

7. Enriching oral vocabulary

8. Formulating sentences

9. Using narrative and expoistory expression

10. Observing individual words or phrases in a one-line reading unit

11. Observing visual details carefully

12. Establishing habits of looking at words and sectences in left to right serial order

13. Improving articulation

14. Auditory perception of hard c, d, j, s, p, t, f, l, m, b, r, w, g, n, h, v

Word Analysis

1. Word attack skills
   a. Recognizing general configeration of word
   b. Recognizing same word with capital and low case letters
   c. Using context clues as an aid to identifying word
   d. Noting and recognizing word form clues
      (1) Likenesses
      (2) Differences
   e. Developing structural analysis skills
      (1) Recognition of words formed by adding s to known root words
   f. Developing phonetic analysis skills
      (1) Perception of rhyme
      (2) Initial consonant sounds (See II.N)

Comprehension and Intrepretation

1. Intrepreting the main idea
2. Intrepreting the story in sequence
3. Noting details and perceiving relationships
4. Identifying speaker sna character spoken to
5. Anticipating outcomes
6. Forming associations
7. Making inferences
8. Recognizing emotional reactions and motives of story characters
9. Comprehending phrase and sentence meanings
10. Making judgments and drawing conclusions
11. Forming sensory images
    a. Visual
    b. Auditory
    c. Kinesthetic
    d. Tactile
12. Perceiving relationships
    a. Place
    b. Association through use
    c. Sequence
    d. Class
    e. Size
    f. Quantity

LEVEL III
Primer

Basic Text

The New Fun With Dick and Jame (with workbook) - Scott, Foresman

Supplementary Texts

1. The Wising Well; Day In ana Day Out- Row, Peterson
2. Fun In Story- Winston
3. Peter's Family; At Home: Good Times With our Friends- Scott, Foresman
4. Our School- Allyn and Bacon
5. Jack and Janet- Houghton Mifflin

Objectives

1. Maintenance of Level II skills
2. Teach 100 sigh words
3. Teach initial consant sounds as outlined in the Teacher's Guide for the New Fun With Dick and Jane

Auditory and Visual Skills

1. Identifying words in capitalized and uncapitalized initial-letter form
2. Observing individual words or phrases in context
3. Visual-auditory perception of rhyme
4. Visual-auditory perception of initial consonants f,b,m,c,w, s,h,t,r,g,y,n,k,l,p,d,j,
5. Substitution of initial consonants

Word Analysis

1. Recognition of words formed by adding 's to known root words
2. Recognition of compound words made up of two known words

Comprehension and Interpretation

1. Forming sensory images of taste
2. Perceiving cause - effect relationships

LEVEL IV
FIRST READER

Basic Text

The New Our New Friends (with workbook) - Scott, Foresman

Supplementary Texts

We Three - Scott, Foresman
The New Round About - Row, Peterson
I Know a Secret - Winston
On Cherry Street - Ginn
Up and Away - Houghton Mifflin
Our Town - Allyn Bacon

Objectives

1. Maintenance of Level III skills
2. Teach 125 sight words; 52 attack words

Auditory and Visual Skills

1. Continuation of all skills taught at the pre-primer and primer level
2. Strengthen recognition and memorization of word forms by
    a. Association of printed word and its meaning
    b. Observing carefully all visual details
    c. Visual pictures of words
3. Develop phonetic-analysis skills by
    a. Perception of initial consonants
    b. Perception of final consonants - s, n, p, t, d, m, l, ch, sh, th
    c. Recognition of initial consonant substitution
    d. Recognition of final consonant substitution
    e. Recognition of silent consonant in words
    f. Recognition of two-letter consonants representing one sound - th, wh, sh, ch

Word Analysis

1. Continuation of all skills taught at the pre-primer and primer level
2. Ability to use initial consonant substitutions in attacking new words

3. Ability to use final consonant substitutions in attacking new words
4. Ability to recognize difference in meaning and inflection by adding new endings to root words - s, 's, d, ed, ing
5. Ability to recognize compound words made up of two known words
6. Ability to recognize contractions
7. Ability to use meaning clues in attacking new words

Comprehension and Interpretation

1. Continuation of all skills taught at the pre-primer and primer level - stress sequence of ideas
2. Ability to interpret ideas that are implied but not directly stated
3. Ability to comprehend phrase and sentence structure and meaning
4. Ability to perceive relationships in regard to
    a. Time
    b. Manner
    c. Size
    d. Space
    e. Number
    f. Class
5. Ability to organize and summarize ideas for the purpose of remembering

LEVEL V
FIRST SECOND READER

Basic Text

The New Friends and Neighbors (with workbook) - Scott, Foresman

Supplementary Texts

Down the River Road - Row, Peterson
We Grow Up - Macmillan
Come Along - Houghton Mifflin
Three Friends: What Next? (first part) - Scott, Foresman
We Are Neighbors - Ginn
Down Singing River - American Book

Objectives

1. Maintenance of Level IV skills
2. Teach 137 sight words and 92 attack words
3. Continue development of extensive sight vocabulary
4. Eliminate undesirable habits of lip movement
5. Hold and handle book properly
6. No marker
7. Do not point
8. Correct eye movements
9. Recognize 85% of the previous vocabulary

Auditory and Visual Skills

1. Develop the ability to recognize likenesses and differences by sight and ear
    a. Initial consonant sounds - b, c, d, f, g, h, j, k, l, m, n, r, p, s, sh, t, th, v, wh

b. Word structure
c. Phonetic parts - ar, aw, ay, er, ew, ir, or, oo (too), oo (book), or (work), ou, ow (slow) or (now), oy, ur (turtle), ch, ck, d, g, kl, ll, m, n, ng
d. Final sounds - p, sh, t, th, y
e. Vowel sounds - a, e, i, o, u (short and long), ai, ea, oa, ay, ee
f. Sound of vowels followed by r, l, w
g. Initial blends - pl, pr, sl, sm, sn, sp, spl, spr, st, str, thr, tr, tw, bo, br, cl, cr, dr, fl, fr, gl, gr
h. Combination sh, ch, wh, th, ck
i. Continue use of rhymes
j. Recognize parts of compound words
k. Find little words in big words

2. Use
   a. Picture clues
   b. Context clues
   c. Word-form clues (memory of word from recall of known words)
   d. Phonetic clues
   e. Associating sound and meaning with printed words

Word Analysis

1. Phonetic analysis
   a. Visualizing a known word which looks like the new word except for the initial or final consonant element
   b. Associating appropriate sound or sounds with the consonant symbol which makes the new word different from the known word
   c. Blending the sound of this consonant element with the adjoining sound in the whole word, br, cr, dr, fr, gr, tr, bl, cl, fl, gl, pl
   d. Word analysis (structural analysis by adding s, 's, d, ed, ing, y, es, er, haven't - have not, weren't - were not, hasn't - has not, didn't - did not)
   e. Doubling final consonant or changing y to i before adding endings
2. Skills
   a. Pronounce all words correctly
   b. Speak plainly and clearly
   c. Speak loudly enough to be heard
   d. Read slowly enough not to run words together
   e. Speak in cheerful and pleasing voice
   f. Do not get out of breath
   g. Use voice to make meaning clear - expression
   h. Continual building of a background of wide experience

Comprehension and Interpretation

1. Interpretation
   a. See picture details
   b. Making inferences
   c. Making judgments
   d. Interpreting the main idea
   e. Visualizing implied actions
   f. Arranging events in sequential order
   g. Be able to read longer units with increased comprehension

2. Understanding
    a. Comprehending sentence meaning
    b. Anticipating outcome
    c. Drawing conclusions
    d. Organizing ideas
3. Objectives
    a. Enjoy literature
    b. To increase rate and accuracy of both oral and silent reading
    c. To be a good oral reader - read to class, other grades, teacher, friends, mother
    d. What to read - poems, plays, stories, children's magazines, children's papers, signs
    e. How to select books
    f. How to be a good silent reader - to find answers, to find in what order things happen, to skim, to judge others' ideas, to use books

LEVEL VI
SECOND SECOND READER (2-2)

Basic Text

The New More Friends and Neighbors (with workbook) - Scott, Foresman

Supplementary Texts

What Next? (second part) - Scott, Foresman
Friendly Village - Row,Peterson
Around the Corner - Ginn
Over a City Bridge - American Book
On We Go - Houghton Mifflin

Objectives

1. Maintenance of Level V skills
2. Teach 134 sight words and 181 attack words

Auditory and Visual Skills

1. Promoting growth in word perception skills
    a. Strengthening memory of word forms based on (1) association of meaning with printed words; (2) careful observation of visual details; (3) visual imagery of words
    b. Testing memory of word forms
    c. Developing phonetic skills
        (1) Visual-auditory perception of consonants - r l s blends, hard and soft c, hard and soft g, qu, squ, str, scr, spr, thr
        (2) Visual and auditory perception of vowels - short and long vowel sounds; vowels followed by r, l, w
        (3) Blending consonant sounds and vowel sounds
        (4) Auditory perceptions of syllables and accent
    d. Developing phonetic understandings
        (1) Silentness - consonants may be silent, silent consonants may be meaning or phonetic clues, silent vowels

usually visual clues to vowel sounds
   - (2) Variability - some consonants have variable sounds, vowel letters stand for more than one sound, different letter may represent same sound, word forms may be meaning clues
   - (3) Principles for determining vowel sounds - position, silent vowels, "r" as a vowel controller, visual clue to a vowel sound usually follows the vowel letter in a word

Word Analysis

1. Phonetic analysis in attacking new words
   - a. Consonant substitution
   - b. Blending consonant and vowel sounds
   - c. Silent consonants
2. Structural analysis in attacking new words
   - a. Recognizing words formed by adding s, es, d, ed, ing, n, en, er, est with no change in root word
   - b. Recognizing words formed by doubling final consonant, dropping final "e", changing "y" to "i" before adding an ending or suffix
   - c. Recognizing contractions with one letter omitted
   - d. Recognizing compounds made up of two known words
   - e. Recognizing words formed by adding suffixes "y", "ly", or "er"
   - f. Identifying root words in inflected or derived forms
   - g. Using meaning clues to check structural analysis
3. Combining structural and phonetic analysis
   - a. Identifying and attacking a root word in inflected, derived, or compounded form
   - b. Using context clues to check combined structural and phonetic analysis
4. Developing dictionary skills
   - a. Understanding that a printed word may represent more than one meaning
   - b. Using sentence context to determine appropriate meanings
   - c. Recognizing alphabetical sequence or general alphabetical position
   - d. Recognizing and identifying root words

Comprehension and Interpretation

1. Interpretation
   - a. Ability to get the most out of what they read
   - b. Ability to think about what they have read and react to it in terms of their own experiences
   - c. Ability to interpret pictures in terms of what is happening
   - d. Ability to form sensory images
   - e. Ability to project themselves into story situation
   - f. Ability to interpret action in light of characters, motives, and emotional reactions
   - g. Ability to anticipate future happenings
   - h. Ability to evaluate idea
   - i. Ability to draw conclusions applicable to every day situations

2. Promoting growth in interpretative skills
    a. Interpreting main idea
    b. Recognizing emotional reactions, motives, and inner drives of story characters
    c. Interpreting ideas implied but not directly stated
    d. Making inferences
    e. Recognizing story or plot structure
    f. Comprehending phrase and sentence meanings
    g. Interpreting figurative picturesque language
    h. Forming sensory images
        (1) Visual
        (2) Auditory
        (3) Kinesthetic
        (4) Touch, smell, taste
    i. Identifying and evaluating character traits
    j. Making judgments and drawing conclusions
    k. Generalizing
    l. Forming associations
    m. Perceiving relationships - time, place, manner, sequence, size, space, number, part-whole, cause-effect
    n. Comparing and contrasting
    o. Rereading for specific information, verifying opinion, or proving a point
    p. Identifying and reacting to mood of passage, story, or poem
    q. Projecting ideas or mood in oral interpretation
    r. Strengthening memory based on observation, association, visual imagery, sequence, cause and effect relationships, part-whole relationships, classification
    s. Summarizing and organizing ideas for purpose of remembering

LEVEL VII
FIRST THIRD READER (3-1)

Basic Text

The New Streets and Roads (with workbook) - Scott, Foresman

Supplementary Texts

Tall Tales (Part I) - Scott, Foresman
Through the Green Gate - Row, Peterson
Looking Ahead - Houghton Mifflin
Beyond Treasure Valley - American Book
Fun and Frolic - Heath
Finding New Neighbors - Ginn

Objectives

1. Maintenance of Level VI skills
2. Teach 118 sight words and 283 attack words

Auditory and Visual Skills

1. Auditory-visual perception of consonants
    a. Single consonant beginnings (mat, fan)
    b. Silent consonants (si~~c~~k, li~~gh~~t)

- c. Consonant substitution
- d. Consonant blends (threw, scratch)
- e. Blending consonant and vowel sounds (ur, er)
- f. Variable consonants (soft and hard c and g)

2. Auditory-visual perception of vowels
   - a. Position of vowels help to determine short and long sounds (hat, on, no, we)
   - b. Vowels followed by r (car, burn, her)
   - c. Vowel a followed by l, u, w (taught, ball, paw)
   - d. Vowel variables (oi, oy, ou, ow, oo as in food, book)
   - e. Silent vowels (paint, rope)
   - f. Schwa or unstressed vowel (ago)
   - g. Visual clue to vowel sound usually follows the vowel letter (it, ice, bird, nib-ble, ti-ny)
3. Auditory-visual perception of syllables
   - a. Relationship of vowel sounds and syllables
     - (1) Word or part of a word in which we hear one vowel sound is called a syllable
     - (2) Single vowel is usually short unless it comes at the end of a word or an accented syllable (no, ba'by)
     - (3) Silent vowels - if there are two vowels together in a word or an accented syllable, the first stands for a long vowel sound, the second is silent
     - (4) If there are two vowels in a word or an accented syllable, one of which is final e, usually the first vowell is long and the final e is silent
   - b. Rules for syllabication
     - (1) If the first vowel is followed by two consonants, the first syllable usually ends with the first of the two consonants (ladder, engine)
     - (2) If the first vowel in a word is followed by a single consonant, that consonant usually begins the second syllable (la-dy)
     - (3) If the word ends with le, the consonant preceding the le usually begins with the last syllable (ta-ble)
4. Auditory-visual perception of accent in syllables
   - a. In words of two or more syllables, one syllable is stressed or accented more than the others (but'ton, lit'tle, i'vy, pa-rade')
   - b. Accent effects vowel sounds in syllables
   - c. If the vowel is long in the second syllable the second syllable is usually accented (con-fuse')
   - d. Use context clues to help determine accent

Word Analysis

1. Phonetic analysis
   - a. Consonant substitution
   - b. Vowel principles
   - c. Syllabication principles
2. Structural analysis
   - a. Recognizing contractions in which one or two letters have been omitted (isn't, we'll)

b. Recognizing root words
    (1) By doubling final consonant (tap, tapped)
    (2) Dropping final e (move, moving)
    (3) Changing y to i (baby, babies)
c. Recognizing words formed by adding prefixes - un, de, re; suffixes - ly, er, ish, ful, en
d. Identifying a word in compound form (understand)
e. Identifying root words in inflected and derived forms (pound, pounding, pounded; hurry, hurried, hurries)

3. Contest - aid in attacking new words

Comprehension and Interpretation

1. Interpreting the main idea
2. Interpreting ideas implied
3. Comprehending phrase and sentence meanings
4. Recognizing story or plot structure
5. Recognizing emotional reactions as excitement, thrills, happiness, ambitions, why and what for
6. Interpreting figures of speech - as hungry as a bear
7. Forming and reacting to sensory images as touch, taste, smell, sight
8. Anticipating what is going to happen or outcome
9. Identifying and evaluating character traits as sly, mean, etc.
10. Comparing and contrasting, tell how things or people are alike or unlike
11. Perceiving relationships as sequence, time, place, cause-effect, part-whole, class
12. Re-reading and skimming to get details or specific information
13. Making judgments and drawing conclusions
14. Drawing conclusions - if this happens, what should be done
15. Summarizing and organizing ideas for the purpose of remembering
16. Achieving effective oral interpretation
17. Making inferences
18. Strengthening memory based on observation, association, visual imagery, auditory imagery, sequence, cause-effect relationships, part-whole relationships

Dictionary Skills

1. Comprehending simple definitions of meanings
2. Understanding that a printed word form may represent more than one meaning
3. Use context to determine meaning
4. Recognizing alphabetical sequence
5. Identifying root words

LEVEL VIII
SECOND THIRD READER

Basic Text

The New More Streets and Roads (with workbook) - Scott, Foresman

Supplementary Texts

Climbing Higher - Houghton Mifflin

Tall Tales (Part II) - Scott, Foresman
Do and Dare - Heath
The Five and Half Club; If I Were Going - Row, Peterson
Friends Far and Near - Ginn
Along Friendly Roads - American Book

Objectives

1. Maintenance of Level VII skills
2. Teach 141 sight words and 357 attack words

Auditory-Visual Skills

1. Final e in words ending in ce, ge, and ve, is not necessarily a clue to the preceding vowel sound (prince)
2. Final e after c or g is a clue to the soft sounds of c and g (fringe)
3. Final v is automatically followed by e in English spelling (twelve)
4. Visual clues to syllabication
   a. Syllables in a word do not break between consonant blends or special two-letter symbols (th, ch, sh, leather, reply)
   b. The letter v may go with the vowel that precedes or follows it (e-ven, sev-en)
5. Visual clues to identify accented syllables in unknown words
   a. In most two-syllable words that end in a consonant followed by y, the first syllable is accented and the second unaccented (ti'ny)
   b. In inflected or derived forms the accent usually falls on or within the root word (fear'-less)
   c. If de, be, re, ex, or a, is the first syllable in a word, it is usually unaccented (ex-plain')
   d. If the final syllable in a word ends in le, preceded by a consonant, it is unaccented (can-dle)
   e. If tion or ture is the final syllable in a word, it is unaccented (pic'-ture, sta'-tion)
6. Variable consonants - voiced s, unvoiced s (least, whose)

Word Analysis

1. Structural analysis
   a. Inflected forms of words in which final f is changed to v before adding endings (loaf, loaves)
   b. Derived forms of words in which the prefixes im and dis, or the suffixes ness and less are added to root words
   c. Combining structural and phonetic analysis in identifying and attaching a root word in inflected, derived, or compounded form.

Comprehension and Interpretation

1. Perceiving relationships of time, place, sequence, part-whole, cause-effect, class, and analogous

Supplementary Materials and Enrichment Activities to be used at all Levels

Workbooks and tests with basic texts
Tests (reading, intelligence, achievement, Weekly Reader, informal)
Games and riddles
Puzzles
Picture books and stories
Dramatic play
Sharing experiences
Art Activities
Story telling
Films and visual aids
Music; records
Songs
Poems
Pictures
Phonetic drill cards
Flannel boards
Chalk board work
Excursions
Library corner

Not all supplementary books listed are stocked in all buildings. If a book the children have not read is not available, contact the Coordinators so books may be borrowed from another building.

At the beginning of the year, the previous level will be reviewed quickly. It is understood that some children may have to read several books on one level before they become competent enough to attack the next level.

PRIMARY LANGUAGE ARTS PROGRAM

The Language Arts Program includes both oral and written expressions of children's experiences, knowledge and interpretations.

The teacher should provide ample opportunity for the children to have experiences that will provide ideas and purposes for conversation. Provision should be made in the daily program for free conversation.

Language Activities

1. Informal conversation
2. Choral speaking, prose and poetry
3. Finger plays
4. Telephoning
5. Group discussions
   To direct observations
   To learn to state ideas so others can understand
6. Planning together
   For plays or dramatizations
   For trips
   For improving standards of behavior or safety
7. Puppet plays
8. Dramatization (courtesy practices, pantomimes and shadow plays, rehearsed plays, stories, and creative)

9. Telling stories, both original and those they know
10. Giving oral messages
11. Giving explanations and directions
12. Letter writing; story writing
13. Captions and labels
14. Short notes and messages
15. Listening (to enjoy literature; for information, instructions, and explanations)

Curricular Resources

1. Everyday experiences at home and at school
2. Holiday and special day activities and interests
3. Recreational and informal reading
4. Group enterprises within the classroom and on field trips
5. Observations and activities related to nature and science study
6. Social studies, health and safety experiences and activities
7. Culminating situations such as programs, class parties, dramatizations, etc.

Underlying Principles

1. Language teaching is a day-long activity - practice language learnings in all forms of speech and writing that are a normal part of everyday activities.
2. The language program should be developed from the normal interests and experiences of children.
3. The language program should take account of language needs in the other subjects.
4. Language skills are more readily learned and mastered in connection with occasions that demand the use of such skills.
5. Language skills should be taught in conformity with child growth and development facts and demands for use of the skills in normal.
6. The language program should make definite provision for individual differences in interests, capacities, and achievement of children.
7. Oral language should be stressed.
8. As the tendency of children to imitate is a strong factor in the improvement of language skills, the teacher should strive to be a correct model.
9. The child should acquire the ability and tendency to appraise his own work.
10. In language teaching, the positive approach is desirable.
11. The power to think clearly and logically underlies all expression - help children acquire organization of thinking.
12. Retention of new learning should be maintained by frequent reviews and additional practice in purposeful application of the skill in a vital language situation.

The Sharing Period

Oral language includes both speaking and listening. These two facets of language are a basis for reading readiness and are essential in the improvement of reading skills and abilities. The practice of having children engage in informal news exchange, show and tell, or sharing period is a valuable part of the daily language experiences in the primary grades. Such a period should be a learning situation with the teacher guiding the conversation so that the children are stimulated into further thinking, discussing, understanding and even experiencing whenever learning activities can grow out of this sharing period.

The teacher should be mindful of creating an atmosphere which encourages ease in speech. Encouraging children to present material of personal interest should be accompanied by some instruction in the use of accepted forms of courtesy and consideration for the listener. Work for an acceptable voice quality, with clear articulation, enunciation, and pronunciation. Distractions should be kept to a minimum so that good listening habits may be acquired. Children should be guided to react with questions or comments, and the teacher should see that all children participate to the extent of their ability.

Correcting oral language errors is usually not done during this period, unless the teacher is writing the item on the board and attention can be drawn to the correct form easily. The teacher may wish to make note of the errors so that they may be called to the individual's attention at a later time. In the second and third grades, errors will usually be corrected in a language skills period when the group will learn to use the correct forms in practice sentences and story telling. Glaring mistakes may be corrected at the time they are made if it is not done in a way to embarrass the child.

Some items may be recorded as room news. Others may lead to experience charts, problem solving, or merely the clarifying of concepts through further discussion and the sharing of ideas and information. Not all of the children's contributions contain possibilities of extending, but the teacher can make use of the situations that may grow into learning activities for individual and group growth.

Oral Expression

1. Continue the habits established in first grade.
2. Speak with fluency. Use a larger vocabulary.
3. Understand function of words in sentences; name words, doing words.
4. Continue elimination of errors in usage and enunciation of common words, went, gone, is, are, etc.
5. Strive to eliminate "me and John" for "John and I", and "My brother he".
6. Teach the use of sentences and what kind they are; statement, question, exclamatory.
7. Evaluate work and make conscious effort to improve.

Written Expression

1. Continue the development of habits and practices from first grade.
2. Continue mastery of correct forms of greetings, thanks, etc.
3. Copy sentences accurately from board.
4. Stress neatness, legibility, and accuracy in all written work.
5. In last semester, be able to write complete sentences from dictation.
6. Develop habit of asking for, or looking up correct spelling.
7. Continue use of capitalization of names, I and O. Introduce capitals for heading of papers. Put periods at the end of sentences.
8. Teach how to place simple written work on a page, using margins and indentations. Where should the title be placed?
9. Use of exclamation point and question mark.
10. Correct way to put an address on envelopes.
11. Continued evaluation of all work, and a conscious effort to improve.
12. Write original stories, poems and rhymes.

Listening

1. Give thoughtful continuous attention for several minutes.
2. Learn new words heard in meaningful context.
3. Follow sequence.
4. Understand increasingly detailed oral explanations and directions.

Activities for the Language Arts Program and Correlation with Other School Activities

1. Story idea. An idea box may help a child who finds it difficult to "make up!" a story. In the box have slips of paper with short phrases or pictures of objects on them. The child may take out a limited number, three or four, and use these as a foundation for the story. Phrases may include:

A dark winter day	A trip with friends
Three happy children	A queer little elf
A treasure chest	Frisky circus animals
A surprise	A strange letter

2. Pictures may be: a ship, train, plane, big house, people, animals, landscapes, etc. - from "Grade Teacher", June 1958
3. Drawing or painting a picture and then talking about it may be the easiest way to encourage a shy child to talk before the group.
4. Using puppets and standing behind the puppet stage will frequently help a shy child to speak louder and more clearly.
5. The teacher may write short stories to be kept in booklets on the library shelf. Children illustrate the pages after reading and telling the story. Some may like to make copies of the story for themselves. Example: "Down comes the snow.
   It makes cars go slow."
6. Guess the story. One or two children create a scene or dramatize a part of a well-known story, using available props. The group tries to identify the story. Build up a scene in a box top for class identification.

Usage of "Saw" and "Seen"

Tell the story of Mrs. Seen who is a very kind mother, always taking one of her children with her. List the "children": have, has, had, were, are, been, am, be; on the blackboard.

Sometimes Mrs. Seen takes two children to help her, as has been.

Mrs. Saw is just the opposite kind of mother. She always goes alone so never say "have saw"; we say, I saw. 419 Tips

Flannel Board

Place a flannel board in the library corner so it may be used when work is finished. Cut out pictures of people, animals, machinery from old magazines; glue small piece of flannel on back. Children can use these in making up stories or scenes from stories they read. Let each child tell his story to the class. 419 Tips

Experience Chart

Our class made jello at school
We heated some water
We used two cups of hot water for one package of jello
We used five packages of jello and ten cups of water
We cut up marshmallows and bananas
We put in two cans of pineapple
We put in three cans of fruit cocktail
We stirred all of this
Then we put it in a big pan
The jello got hard
We ate it on the day of our party
My, My, it was good!

Use charts freely and make them exciting. They can tell a story, record an experience, provide directions, or list suggestions. Any subject is suitable. They can be teacher-made or done by the teacher and the children. They can be decorated by the children or they may pictorialize the subject with the use of drawings or cut-outs. Writing on cloth with chalk is most effective for special things. The chalk washes out of the cloth and makes it reusable. Real objects add interest. Pictures may be used to substitute for words. Try a flip chart where a picture or word on the chart is covered up by a flap of colored paper labeled "Look under here" or "Pick me up".

SPELLING

Second Grade - Regular Group

Formal spelling will be introduced in second grade.

The present text is "Breed and Seale". Where replacements are necessary Webster's "The New Spelling Goals" is to be used.

Second Grade - Basic Group

1. Formal spelling will be postponed until second semester.
2. First semester - children will continue to learn names and sounds of letters and correct formation of the letters.
3. Use second grade "New Spelling Goals" text starting Unit I beginning of second semester.
4. Extend time required for each lesson if necessary. Suggestions in this text for method and procedure should be followed, but it is not necessary to work as rapidly as suggested.
5. Approximately one-third of the text will probably be covered at this rate.

Second Grade - Major Group

1. Use regular second grade text, but supplement word lists with words from other subjects, good news, etc.
2. Children could be encouraged to develop individual dictionaries or file boxes of spelling words to be used in creative writing and individual assignments. (See the plan of the A-Z Spellers, Keller, Foster, and Seagoe)
3. Increase creative writing and encourage children to proofread their own papers for correct spelling.

Comments

Written expression involves a workable spelling program. Children must learn to spell the words frequently used in their written vocabularies. The teacher will need to add to the weekly spelling list words that are frequently misspelled in written work.

Basic group will require many group-teaching-learning experiences. Motivation is important.

Drill and repetition should be enhanced by variety for the basic group. The use of games and motor activities is important in the basic group. Records of misspelled words will need to be a group activity in the basic group.

Attainments

1. Every child able to transfer spelling skill to composition.
2. A knowledge of correct study procedure.
3. A quick mental image of the letters involved in the spelling of the word.
4. Know letters of alphabet and be able to write them.
5. Configuration of the word to be learned.
6. Ear training in the syllabication of the word.
7. Developing in the child the habit of keeping a record of his own misspelled words and mastering them through special study.

WRITING

It is believed that the advantage of manuscript writing extends into the second grade in helping the child to read and to spell.

Techniques in Manuscript Alphabet (Follow Zaner-Bloser Manual)

1. Make each stroke of a letter as you come to it.
2. Start all letters at the top.
3. Make all letters with straight lines and circles.
4. Make all capital letters two spaces high at first and reduce to fit within the spaces provided on regular writing paper by the end of the first semester.
5. Make figures same size as small letters.
6. Space letters in words as follows:
    a. Circular letters close together.
    b. Circular and vertical letters further apart.
    c. Vertical letters farthest apart.
7. Space words as follows:
    a. On the blackboard, four fingers apart.
    b. On paper, width of capital A apart.

Points to be Emphasized

1. The necessity for second grade teachers to learn good manuscript writing.
2. The value of keeping pupil progress records by the teacher to make comparisons of an individual's work throughout the year.

3. Well planned practice periods should be arranged in short periods each day. Ten minutes is recommended for primary children.
4. Pupils should be afforded many opportunities to write in connection with their experiences.
5. Discriminate between lower and high case letters.

Basic Group

1. Directed activities combined with spelling and language activities.

Regular Group

1. Strive to constantly improve quality of writing.
2. Encourage children to express ideas or thoughts in writing.

Major Group

1. More legibility.
2. More variety.
3. More free writing.

Examples of Letter Writing on Primary Grade Level

1. An Invitation

Dear Mother
Dear Father
Come to PTA
On Thursday
At two o'clock

2. A Thank You Note

Dear Mrs. Smith
Thank you for the good cookies.
I had a nice Valentine party.
Love
Karen

3. A Request

Dear Mother
May I have twenty-five cents for
My Weekly Reader?
Thank you.
Love
Bill

4. A Friendly Note

Dear Mary
I hope you are feeling better.
I miss you at school.
Love
Jane

Cards with Art Illustrations

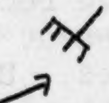
1. Sick cards to classmates.
2. Birthday card made and distributed by each pupil.
3. Christmas card.
4. Valentine greetings.
5. Easter card.
6. Mother's Day card.
7. Besides written messages the use of To and From.

Examples of Copying Short Sentences from Blackboard and Illustrating with a Drawing

A cookie for Sally

A cookie for Spot

A cookie for Tim

work  play

up ↗ down ↘

come ← go →

big little

Showing Possession

Sally's Tim

Dick's boat

Jane's ball

Christmas Ideas - use imagination

Sally wants a ________________.
Jane wants a ________________.
Dick wants a ________________.
I want a ________________.

Copying of classmates names for Valentines. Encourage the addressing of own Valentines using To and From.

Examples of Record Keeping

Diary: Today is Wednesday, March 5, 1959. It is snowing and blowing outside. We learned a poem about a snowman. Some of us made snowflakes. Some of us painted. We read a story about a snow party. We had fun at school.

Chart of School Family

Make self portraits - write own name
Make pictures of school principal, teacher, nurse, cooks, custodian and bus driver.
List with name and type of work.
List the number of girls and the number of boys.

Some Popular Subjects:
What I Like to Do
My Family
When I Grow Up
A Pet I'd Like to Have

Writing

Write personal notes to children. Fasten them on their desks, slip them in their workbooks for a surprise when they prepare to go to work. Greet them on their birthday. Tell them you are glad they are back in school. Ask them to do a job for you. Anything for a surprise. Children will respond by writing notes to teacher.

I Can, Can You?

Children all like to have recognition for what they can do. If we start talking about the different things we can do, we will find an unlimited variety of abilities. Use bulletin board. Write "I can, can you?" Extend this by having the children make representations of some accomplishment, writing under each the phrase which describes it. Assemble into a book, writing the appropriate phrase at the bottom of each picture. More advanced students can write short stories about what they can do and how it is done. Children might also assemble booklets of things they can do now, and things they want to do some day. Do the same kinds of things, but use bulletin boards.

Look, Look!

Talk about the kinds of things we see when we look. Draw pictures of the things they see, and depending upon the ability of the child, write the story.

"Look, Jane, look.
See the (picture of object)"

As reading vocabulary grows, stories can be lengthened.

"Come, Jane, come.
Come and see the ____________.
The ____________ can run.
Look, Jane, look.
See it run."

Adaptations can be made in many different situations and at many different levels.

LITERATURE

Children respond eagerly and naturally to the rhythm of poetry (the tune of words) and the imagery and action of stories. A true test of their enjoyment is their request to "Read it again." Literature must be related to a child's experiences in order for him to recreate his own image of the author's words.

One learn[illegible] understand and appreciate good literature long before he learns to express his image of it or his feeling. Exact meaning of words is not essential to enjoyment but one does need background to make it possible for him to experience vicariously the scene or feeling expressed.

The literature period needs to be relaxed and natural. Informal seating is best. The teacher's manner, plus her use of the right poem at the right time, creates enthusiasm for poetry.

Encourage memory of poems, but do not force it. Favorite poems may be learned in class, all working together. Many short ones can be learned by a few repetitions. Not all children will be interested in learning the same poems, but all children should learn some.

Include a wide selection of material. Not all children respond to the same things and all children need to learn to enjoy many kinds.

Attainments for the Primary Grades

1. To develop a better understanding for everyday things through poetry and stories.
2. To broaden the child's horizon of the world about him.
3. To develop standards of appreciation of the beauty of words and the rhythm of poetry.
4. To learn to respond spontaneously to poems and stories.
5. To learn to interpret literary works to others through story telling activities, illustrations, or dramatization.
6. To build a good repertoire of poems and stories - some to say from memory, or to tell; others to enjoy and know.

Suggested Material for the Literature Program

1. Poems, jingles, rhymes and stories about
    - People and places
    - Animals and nature
    - Work and play
    - Travels, real and imaginary
    - Magic and make-believe
    - Mother Goose
    - Beauty and wisdom
    - Humor
2. Dramatization
3. Original expression
    - Creative, through pictures, rhythms clapped out, or acted out
    - Retelling
    - Choosing descriptive words
    - Finding the rhyming words and using them other ways.
4. Related activities
    - Choral speaking
    - Illustrating
    - Story booklets
    - Class story books
    - Bulletin boards
    - Flannelgrams
    - Puppets
    - Vocabulary charts of new and interesting words

Literature Activities

Use a story or a group of stories in the literary readers as an introduction to a specific type of literature. After more extensive individual reading help, the class may want to summarize the characteristics of such stories and to share their findings with another class.

Identify with the children the characteristics of a certain type of literature, and have them write their own stories using these characteristics.

See how many versions of a particular story the class can find. Discuss their likenesses and differences. Discuss their qualifications as to being good literature.

Sing poems and nursery rhymes, or clap to their rhythm.

Develop and read a poem cycle, grouping poems on some particular topic such as "Mice", "Fairies"; compare the way different poets express similar ideas.

Learn sayings from old tales and proverbs. Discuss their meanings. Compare the wisdom of folk sayings with modern sayings of advertising slogans.

Present short skits in which people from different books act together. Strive to portray the real characteristics of these people.

Make maps of the stories we read. Fairyland could show such places as the king's castle, the tunnels of the goblins, the rivers of the mermaids, the enchanted forest, and any other interesting location found in the story.

To Encourage Creative Expression and Build Vocabulary

Use different types of materials; assemble a make-believe animal. Display it. Stimulate creative story telling or writing by such questions as, "Where do you think the make-believe animal lives?" "What can he do?" "Why?" "Does he have a name?" "How does he get from one place to another?"

Write the beginning lines of a short poem to describe a picture or an idea. Children try to finish the poem, either independently or with the teacher.

Be a "mood setter". Stimulate original stories with a picture from a magazine; e.g., a bare tree; ask the children, "I wonder how the tree feels when it loses all its leaves.", or "How does it feel to be in a fog?" "How do you think it would feel to fly to the moon?"

Motivate children to creative writing through movement; "Make yourself tall, small, round. How do you feel when you are tall?", etc.

Try writing a round-robin story where each child adds an incident.

Channel their fears by capturing the mood and writing about them.

Collect or draw pictures for a booklet to be placed in the library. Write captions for the pictures, if first grade; short sentences for second; and stories for third.

PRIMARY REFERENCES

Literary Collections in Story and Verse

Childcraft, Volumes 1, 2, 3, and 4
Child's World, Volumes 1 and 2
My Bookhouse - Miller, Olive
Time for Poetry - Arbuthnot - Scott, Foresman
Anthology of Children's Literature - Arbuthnot - Scott, Foresman
Mother Goose - Sass and Dorne - Random House
A Picture Book of Mother Goose - Coward
Book Trails - Shepard and Lawrence
Golden Books
Better Homes and Gardens Storybook
Now We Are Six - A. A. Milne - Dutton

Told Under the Umbrella Books
Silver Pennies - Thompson
Chimney Corner Stories - Hutchinson, Minton, Balch & Company
Poems - Rachel Field - Macmillan
Story and Verse for Children - Huber - Macmillan
Illustrated Treasury of Children's Literature - Martignoni
    Grossett and Dunlap
Under the Tent of the Sky - Breuton - Macmillan
A Small Child's Book of Verse - Doane - Oxford
419 Primary Ways - Normal Instructor

Choral Speaking

Let's Read Together Poems - Kindergarten and Primary - Row, Peterson
Choral Speaking - Hamphill - Educational Publishing Corporation

Magazines

Activities for Children
Children's Activities
Jack and Jill
Wee Wisdom
Humpty Dumpty
Ideals

Films and Tape Recordings - Film Strips

Refer to film library

Records

Poetry Time - May Hill Arbuthnot

Bulletins with Posters, Outlines and Good Teaching Suggestions

Independent Activities, Grade 1-6, 15¢ a copy, American Educ. Publ.
Such Interesting Things To Do - Independent Activities in Language
Arts for Primary Grades, Scott, Foresman and Co. Free
Developing Children's Word-Perception Power, Grade 1-3,
    Scott, Foresman and Co. Free
Teaching Trends, Scott, Foresman and Co. Free
Primary Activities, Scott, Foresman and Co.
Supervisor's Handbook, Scott, Foresman and Co.
McKee Language Service Bulletin, Houghton Mifflin. Free
McKee Language Service Poster, Houghton Mifflin. Free
Ways in Which You Can Help Your Child With Reading, Row, Peterson. Free
Teaching Children to Read in the Primary Grades, Panel. McKee,
    Houghton Mifflin. Free
Instructions in Children's Literature, Panel. McKee, Houghton Mifflin
Spelling as Developed in the Language Arts Programs of the New Alice
    and Jerry Books, Grades 1-3, Row, Peterson and Co.
Enrichment Activities for the Superior Child, Ginn and Co.
Let's Play a Game, Ginn and Co.
Language Arts Can Be Creative, published by Department of Kindergarten,
    Primary Education, NEA, $1.00 membership fee
The Telephone and How We Use It, published by Bell Telephone
    System. Free

Ditto Workbooks

See catalog of: Ditto Company
Continental Press
Gel-Sten

Language Texts

First Grade - Monroe, Artley and Gray - "We Talk, Spell and Write" Book I and II
Second Grade - Houghton Mifflin - "Let's Talk," McKee, Harrison
Third Grade - Houghton Mifflin - "Building Our Language" McKee, Harrison

Spelling Texts

My Word Book, or the New Spelling Goals
Supplementary Activities from A-Z Spellers - Helen B. Keller, Mary Farster and May Seagoe

ARITHMETIC

Arithmetic teaching should develop desirable attitudes and increased recognition of the importance of the use of numbers. This involves such habits as working steadily, thoroughly, neatly, and independently. The child should also learn to work happily, build interests from his work, understand what he is doing, and evaluate his own progress.

General Objectives

To develop meanings and understand by progressing from concrete to semi-concrete toward the abstract concepts.

To develop genuine understanding of arithmetic as a system of interrelated principles.

To stimulate learning through discovery and by doing.

To capitalize upon classroom situations which meet the life needs and interests of the child.

To develop accuracy and facility in computation of arithmetical situations.

To help the child become more intelligently self-directive in solving his own problems.

To help the child to learn how to evaluate his own progress.

To stimulate the children to inquire.

Suggested Time and Content

First Quarter - Pages 1-36
Sequence of tens to 9 tens
Ordinals first to tenth
Understanding and writing numerals to 100
Learning about pennies, nickels and dimes

Number sequence and patterns to 100 from the number line
Writing number sentences and understanding number sentences with the signs +, -, and =
½ and ¼ of an object
Measuring by the inch and half inch
Telling time to the half hour
Understanding tens' place and ones' place
Understanding addition and subtraction facts with sums and minuends to 10

Second Quarter - Pages 36 - 72
Learning to read and solve number stories
Addition and subtraction facts with 1 developed from the number line
Adding and subtracting tens
Using a calendar
Telling time to 5-minute intervals
Writing, understanding, and reading numerals to 200
Adding 3 numbers
Quarts, pints, and half pints
Recognizing geometric shapes
Working with the number line to see relationships and patterns among numbers to 200
Adding and subtracting facts with two-figure numerals
Counting money by fives and tens
½ and ¼ of the number in a set of objects
Addition and subtraction facts with sums and minuends to 12

Third Quarter - Pages 73 - 110
Understanding and writing numerals in sequence to 1000 and as hundreds, tens, and ones
Addition with two-figure numeral with three place sums
Subtraction with two-figure subtrahends and three-figure minuends
Understanding the value of the quarter, half-dollar, and one-dollar bill
Zero generalizations in addition and subtraction with two-figure numerals
Dozen and ½ dozen
Relationship between addition and subtraction examples
One third of an object and of the number in a set
Maintaining understanding of money and skill in telling time
Addition and subtraction facts with sums and minuends to 18

Fourth Quarter - Pages 111 - 144
Adding using the number line with and without bridging
Using the relationship between adding and subtraction to find a missing numeral
Using subtraction to find how many more or how many fewer
Subtraction with the number line
Counting by twos to 30
Using a thermometer
Maintaining understanding of geometry, fractions, calendar, and solving problems
Multiplication facts with 2, 3, and 4 up to 4 x 4 = 16 and 3 x 6 = 18 and the related division facts

Basic Text

Modern Arithmetic Through Discovery. (Book II) Robert Lee Morton, Merle Gray, and Myron F. Rosskopf. Chicago: Silver Burdett Co., 1962.

Suggested Procedure

Follow the manual carefully.
Each child has a workbook.
Supplement the workbook with board work, ditto work, games, films, and experiences.

Suggested Activities

Attendance: counting children present or absent
Supplies: counting supplies needed
Temperature: reading the thermometer
Calendar: checking the date of the day, day of the week, and days of the month
Money: counting lunch money and picture money, etc.
Clock: learning the schedule for opening, closing, recess, and noon
Books: pages by number, using table of contents, number of books needed
Elections: voting on class issues, recording votes
House number, license tags, telephone numbers
Build a store or post office

Suggested Materials

Small articles from the dime store
Flannel board
Paper pie plates
Flash cards
Stick, spoons, straws, construction paper objects
Paper and real clocks
Money, abacus
Thermometer, jars for measuring charts
Objects in the room
Audio Visual Materials:

Can You Make Change?	FS-P42
How Many?	FS-Z5
Learning About and Using Pennies, Nickels, Dimes	FS-L19
The Tea Party	FS-Z9
Using and Understanding Numbers by 1s, 2s, 5s, and 10s	FS-L22
How Much Will It Hold?	FS-P20
Using and Understanding Simple Measures	FS-L25
Part I - Hour and Half Hour	FS-Z99
Part II - The Minutes	FS-Z100
Learning to Tell Time	FS-L18
Time Telling Quizmo Game	Kit 12
Addition and Subtraction Quizmo Game	Kit 11

Evaluation

Are the arithmetic experiences meaningful?
Is the child learning by doing?
Is the child discovering meaning and relationships?
Is arithmetic being related to the child's life?

Arithmetic Revision Committee - 1964: Dona Larson, Lebhart, Chairman: Mary Black, Goins; Betty Lufkin, Clark; Alice Ferguson, Cole: Pat Marvel, Goins.

SOCIAL STUDIES
(Revised 1964)

The second grade major center of interest is the community and its work. Earlier activities in connection with various persons and institutions in the community should be extended. The purpose of this topic selection is to develop knowledge of the interdependence of the community life.

Basic Concepts to be Developed

Geographical Concepts

- Earth is the home of man.
- The earth is represented by a small ball called a globe.
- The earth is called a planet.
- It is moving very rapidly.
- Night and day due to the earth's movement.
- Right and left.
- Cardinal direction.
- Location by streets and roads.
- Use of floor maps oriented to north.
- Recognize difference between land and water areas on globe.

Historical Concepts

- Clock and calendar time.
- Courageous men like Columbus found new lands.
- Holiday-contributions of great men.
- Growth and change in self due to time.

Social Understandings

- Appreciation of neighborhood and community relationships:
  - workers in protection, providing homes, providing food, recreation.
- Sources of food.
- Everyone is dependent upon those who produce and prepare food.
- Use of money.
- Communities are made up of many people doing many different kinds of work.
- Communities contain many kinds of buildings.
- Government of community assists in protection, recreation, education.
- Everyone has a community responsibility.

Attitudes, Values, Ideals

- Recognize and respect the rights of others.
- Recognize one's responsibilities.
- Work cooperatively and harmoniously in groups.
- Respect and adhere to group regulations.

Skills, Abilities, Habits

- Give own illustrations.
- Relate facts observed or read to past experiences.
- Apply facts read or observed to his own life or school.
- Recognizing a problem situation and planning what to do.
- Improve basic skills of communication.

UNIT I - Getting Acquainted with School (1 week)

Learn new classroom and school situations
Become acquainted with Principal and other Teachers
Learn fire and Civil Defense Signals
Playground and street crossing safety
Importance of knowing what to do in school.
Emphasis on school citizenship

UNIT II - Workers Who Protect Us (6 weeks)

A. Fireman
Stories About Sally pp. 38-43
In the Neighborhood pp. 80-87
Billy's Neighbors pp. 19-38

The City Fire Department is glad to send a speaker and/or welcome a class visit.

B. Doctor, Nurse, Dentist
Seven or So (Scott, Foresman) pp. 122-123, 126-132, 36-37, 76-77, 85-129.

The school nurse will visit the class to become acquainted and answer questions about doctors and dentists as well as about herself.

C. Policemen
Stories About Sally pp. 33-37
In the Neighborhood p. 88
Billy's Neighbors pp. 69-86

A policeman will visit your class if requested. A school patrol boy could tell the class his duties and what he expects of the children.

UNIT III - Workers Who Help Us Enjoy Life (8 weeks)

Learn to appreciate and understand those who make our life more enjoyable.

Text: Stories About Sally

A. News and Messages
Television workers pp. 7-11
Newspaper Workers pp. 12-13
Radio Workers pp. 14-17
Telephone Co. Workers pp. 18-24
Postal Workers pp. 44-50
Librarian pp. 25-30

B. City Workers
Park Workers p. 31
Street Cleaners and Repair Crews p. 32

C. Transportation Workers
Railroad Workers pp. 51-62
Airline Workers pp. 67-71
Bus Driver p. 113

Taxicab Driver p. 114
Streetcar Conductor p. 115
Ship and Boat Worker pp. 116-125
Other References - Stories About Sally pp. 129-132, 133-136
Library of Science - Vol. 8, pp. 6-46

UNIT IV - Holiday Occasions

Holiday units should be worked into the program at the appropriate time to present them.

A. First Semester Units for Holidays
- Wyoming Day
- Columbus Day
- Armistice Day
- Halloween
- Thanksgiving
- Christmas
- New Year's Day

B. Second Semester Units for Holidays
- Lincoln's Birthday
- Washington's Birthday
- Valentine's Day
- Easter
- Arbor Day
- Mother's Day
- Memorial Day

UNIT V - Workers Who Build Our Homes (4 weeks)

A. Types of Homes
1. Concrete
2. Prefabricated
   "The Prefabricated House," Raymond K. Groff, Rudolph A. Matern and Henry Lionel Williams, (Doubleday & Co., Inc.)
3. Steel
   "Your Art Heritage," Olive L. Riley (McGraw-Hill).
4. Wood
   "Materials and Construction," John Batesman (Pitman Publishing Co.).

B. People who Build Your Homes
- Carpenters
- Electricians
- Plumbers

UNIT VI - Workers Who Help Us Get Food (6 weeks)

A. At the Food Store - Stories About Sally p. 76
Story Books: "The First Supermarket" Jeanne Bandick
"Let's Go to a Supermarket" J. M. Goodspeed
Poetry Books: "Groceries" in I Live in a City
"Counters" in Sung Under the Silver Umbrella
"Playing Store" in Around and About
"General Store" in The Golden Book of Poetry
Films and Film Strips:
"The Grocer"
"Shopping for Groceries"
"Where Does Our Food Come From?"

"Stores in our Community"
Activities: Make a Classroom store

B. A Visit to the Diary - Stories About Sally P. 81
Story Books: "Milk For You", G. Warren Schlost
"Charley The Horse", Tony Plazza
"While Susie Sleeps", Nina Schneider
"The Farmer and His Cows", Louise Lee Floethe
"This is the Milk That Jack Drank", William R. Scott
Poetry Books: "The Pasture" in Story and Verse for Children
"Milk in Winter" in Stories to Begin On
"The Milkman" in Gaily We Parade
"The Milkman" in Song Under the Silver Umbrella
Films and Filmstrips: "The Dairy Farm"
"Cows on the Farm"
"The Milkman"
"Ice Cream"
Activities: An excursion to a local dairy

C. The Bakery - Stories About Sally p. 86
Story Books: "Baker Bill", Jene Barr
"Let's Go to a Bakery", Naomi Bickheimer
"Baker's Man", Rosalys Hall
"Hundreds and Hundreds of Pancakes", Audrey Chalmers
Activities: An excursion to a bakery

Available Filmstrips:

Unit I	The Safe Way to School	FS K23
	The Slide	FS G35
	Let's Play Safe	MP 19
	How to Ride Your Bicycle Safely	FS P2
	A Day at School	FS Y16
	Family Fun	FS Y10
	Jim's Family	FS Y15
	Growing UP	FS Y14
Unit II	City Helpers	FS Y52
	The Dentist	FS Y48 and T50
	The Fireman	FS Y43 and T41
	The Fireman	FS L26 and Mp 14
	Learning About Kinds of Workers	1B 91
	The Policeman	FS Y45, T43, L28
	The Postman	FS Y44, T42, L27, PS 17
Unit III	The Baker	FS Y47, T45
	The Baker	FS L30
	City Helpers	FS Y52, T54
	The Food Store	FS Y37
	Getting Food Ready for Market	FS Y35
	The Grocer	FS L29, Y46, T44
	The Librarian	FS Y50, T52
	Highway Transportation	FS Y22
	Family Shopping Trip	FS Y19
	The Food Store	FS Y37
	Learning about Communication and Transportation	1B 92
	Learning About the Library	1B 90
	Keeping Food from Spoiling	FS Y 36

Unit IV	Christmas in America	FS B10
	Christmas Pioneer Style	T 522
	The Circus	FS B13
	The Fourth of July	FS C14
	Abraham Lincoln	PS 32
	Easter Greetings	T 56
Unit V	Machines That Move Earth	MP 20
	Logging	FS E6
	Kinds of Houses	FS U18, Z52
	The Fir Tree	FS Z17
	Big Trees of California	FS A37
	Tools and Material for Building Houses	FS U19, Z53
Unit VI	Climate and Plants	FS B17
	Citrus, the Golden Fruit	MP 54
	Learning About Milk We Drink	1B 95
	Learning About Community Services	1B 94

Activities

Excursions: library, museum, lumber co., Post Office
Talks: policeman, firemen
Construction: Watch construction of new buildings
Charts: Make map of neighborhood - Scott Foresman
Dramatization: Make up story of community helpers and act it out

Social Studies Revision Committee - 1964

Susan Conn, Bain, Chairman
Elizabeth Groh, Bain
Elaine Halstead, Bain
Fran Boan, Corlett
Donna Purkiss, Clark

SCIENCE
(Revised 1964)

Second grade teachers should make use of the materials brought in by the children. Where keen interest is shown in some project, a short period of time may be devoted to it. Keep this material in line with your unit work.

General Objective

To provide opportunities for the pupil to use scientific information and methods of thinking for better interpreting his environment.

Unit I - The Earth and the Universe (4 weeks)

Airplane
  Text: pp. 6-8
  A. Collect pictures for bulletin board showing different kinds of planes.
  B. Draw picture of plane.
  C. Tell about actual plane experiences.
  D. Learn song in American Singer, Book Two, pp. 46 "The Airplane".
The Earth is Big
  Text pp. 12-16
  A. Demonstrate with room globe its physical characteristics.

- B. Show how plane can circle the earth.
- C. Make experience chart for the bulletin board.

The Sun
- Text pp. 17-20
  - A. Demonstrate with room globe how the earth rotates.
  - B. Demonstrate with flashlight and globe day and night cycle and the seasons of the year.

The Moon
- Text pp. 21-26
  - A. Draw on dark construction paper the different phases of the moon.
  - B. Demonstrate with room globe that the earth does the turning.

Other Heavenly Bodies
- Text pp. 27-34
  - A. Construct the Big Dipper with dark paper and stars.
  - B. Read available reference material.
  - C. Make experience charts.
  - D. Learn song in American Singer, pp. 10, "The Sky"

Unit II - Plants and Animals in Fall (4 weeks)

An Autumn Walk
- Text pp. 35-44
  - A. Make leaf collection.
  - B. Learn song in American Singer, pp. 13, "Trees in Autumn".
  - C. Make seed exhibit.

Caterpillars Change
- Text pp. 45-50
  - A. Make chart of caterpillar cycle.
  - B. Show actual cocoon.

Other Insects in Autumn
- Text pp. 51-54
  - A. Make chart of autumn insects.
  - B. Read available material on insects.

Concepts to be developed

1. In certain regions the coloring and falling of leaves, the disappearance of some of the birds and increase coolness of air.
2. Many plants die, changing of insects - like the grasshopper and the caterpillar.

Teaching procedures

1. What are signs of Autumn (and the spelling of this word is to be taught)?
2. Why do leaves turn different colors?
3. How we learn about other changes?
4. What kinds of animals are insects?
5. Notice difference between spiders and grasshoppers.
6. Names of birds that migrate.
7. Name some seeds with wings and those carried by animals.
8. Names of animals that hibernate.
9. What happens to the frogs, snakes, ants, and the turtles?
10. What happens to the caterpillar and the grasshopper?

Activities

A fall walk, collect nests, gather seeds and plant. Have children look for caterpillars and watch them go through their cycle. Gather leaves and mount.

Filmstrips: Autumn is Here FS T42 and FS J 21 pri. & int.

UNIT III - Rocks, Air, and Water (4 weeks)

Rocks Tell Stories
- Text pp. 55-60
- A. Display building rock exhibit.
- B. Encourage private collections.
- C. Demonstrate text experiments.

You Need Air and You Can Make Air Do Things
- Text pp. 61-64
- A. Experiment No. 1 - "Is Air Real" pp. 7 - Junior Science Manual (Lab)
- B. Experiment No. 2 - "Is an Empty Bottle Really Empty?" pp. 7 - Junior Science Lab. Manual
- C. Experiment No. 3 - "How Can We Show That Air Occupies Space?" pp. 8
- D. Experiment No. 5 - "Can We Show That Air Takes Up Space?" pp. 9
- E. Learn Song in American Singer, pp. 172, "The Windmill".

Where Did the Water Go?
- Text pp. 65-68
- A. Experiment No. 51, Jr. Science Lab. Manual, pp. 33, "What Materials Hold Water?"
- B. Experiment No. 54, pp. 35, "Does Water Make Things Weigh Less?"
- C. Experiment No. 55, pp. 35, "Can We Use Water As A Magnifying Glass?"
- D. Experiment No. 58, pp. 37, "What Happens To Some Materials When They Are Put In Water?"

Water Comes Out of the Air
- Text pp. 69-70
- A. Experiment No. 56, Jr. Science Lab. Manual, pp. 36, "Does Water Evaporate Into the Air?"

UNIT IV - Weather (4 weeks)

Different Kinds of Days
- Text pp. 71-81
- A. Keep a day by day weather chart for a month.
- B. Experiment No. 13, Jr. Science Lab. Manual, pp. 13, "How Are Clouds Formed?"
- C. Learn song in American Singer, pp. 28, "Clouds".
- D. Experiment No. 14, pp. 14, "Dividing Hot and Cold Currents of Air".
- E. Learn "The Windmill", American Singer, pp. 172
- F. Collect snow, measure the amount of water in the snow.
- G. Cut Snowflakes.
- H. Learn "Snowflakes", American Singer, pp. 90.
- I. Construct a weather map of our country.

UNIT V - Change (2 weeks)

Things Change
- Text pp. 82 - 84
- Teacher's Guide pp. 66-67
- A. Supplies needed - pan, 3 glasses, sugar, salt, flour, sand

More Changes
- Text pp. 85-89
- Teacher's Guide pp. 67-68
- A. Supplies needed - 5 pieces of dark construction paper

Films Available

"Things in the World That Help Us"	FS 34	use of energy
"How Things in the World Change"	FS J35	matter and energy
"Things in the World Change"	FS J40	

Unit VI - The Human Body (4 weeks)

Your Skin
  Text pp. 90-92
  A. Make drawing to show that skin is made up of two layers.
  B. Make chart to show what each layer consists of.
  C. Do experiments suggested in text and teacher's guide book.

Food
  Text pp. 93-95
  A. Put up chart with the basic groups of foods.
  B. Classify the groups showing what they do for us.
  C. Make a food booklet - may be in three parts - breakfast, lunch, and dinner.
  D. Make use of the available free materials listed in professional magazines.

When Were You Sick?
  Text pp. 96-99
  A. Let pupils tell what diseases they have had.
  B. Make Chart of so-called children's diseases.
  C. Use the free health posters that show how colds are spread, treatment for them, and use of handkerchief to prevent germs from flying all over a neighbor.
  D. Use any available material that stresses how germs spread diseases.
  E. Bring in the roll of the school nurse and how she helps protect us.
  F. Discuss thoroughly why too many colds are extremely dangerous for the body.

Bones and Muscles
  Text pp.100-104
  A. The school's model of Man may be used to show bone structure.
  B. Encourage pupils to bring their own Invisible Man.
  C. Let youngsters tell about broken bones they've had - x-ray useful.
  D. Bring in animal skeletons.
  E. Trip to museum to study skeletons if museum is close.
  F. Use materials listed in teacher's guide - films, books, etc.
  G. Demonstrate how bones are moved.

You
  Text pp. 105-108
  A. Review how we grow from the health lessons at the beginning of the year. Text: Seven or So.
  B. Let youngsters bring pictures of members in their families and tell which ones resemble one another and how.
  C. Use any available A.V. materials to show human growth.
  D. Follow the suggestions in the teacher's guide.

Unit VII - Matter and Energy (7 weeks)

Magnets
  Text pp. 118-121
  A. Teacher's Guide pp. 84-86
  B. Suggested Supplies: magnets, nails, dish, metal "things", knife

Electricity
Text pp. 122-126
A. Teacher's Guide pp. 86-88
B. Suggested Supplies: dry-cell

Things That Make Sounds
Text pp. 127-130
A. Teacher's Guide pp. 89-90
B. Suggested Supplies: variety of "noise-makers", light "things", drum.

Heat
Text pp. 131-136
A. Teacher's Guide pp. 90-93
B. Suggested Supplies: candy, box, dish, 2 thermometers, soil, electric iron, ice

Light
Text pp. 137-38
A. Teacher's Guide pp. 93-94
B. Suggested Supplies: light meter, flashlight.

Machines
Text pp. 6-7 and 139-143
A. Teacher's Guide pp. 95-96
B. Suggested Supplies: spool, large nail, toys (wheels), long board, block (wood or cement).

Films Available

"Magnets"	FS E18
"Michael Discovers the Magnet"	MP 23
"Magnetism and Electricity"	FS W26, U3
"Story of Thomas A. Edison"	FS H2
"Light, Heat, and Sound"	FS W27, U4
"Machines and Tools that Help Us Work"	FS W25, U2
"Using Atomic Energy for Electric Power"	FS P36

Kit Available

Magnetism and Electricity (flannel board cut-outs)	Kit 18
Elementary Science Charts	Kits 46 & 47

Unit VIII - Pets and Young Animals (2 weeks)

Text: pp. 144-150

Problems: How should you care for pets? What are kittens and other furry animals like at birth?

Concepts to be developed:

1. A pet needs clean warm beds, water and food.
2. Hamsters and Guinea Pigs make good pets.
3. Many animals may be kept as pets.
4. Some animals are blind and helpless at birth and others aren't
5. Some animals are born with teeth.
6. Some animals get milk from their mothers.

Teaching Procedures:

Teach the word "born" before getting too far in the discussion. Look at pictures of baby animals. If possible, inquire around about newborn kittens or other animals that wouldn't be messy at school. The old science book has excellent pictures to help introduce this unit. Conservation should be taught. Emphasis should be stressed concerning baby birds and others taken from their nests. Also tell them how and what to do if a young animal is found motherless.

Follow-up Activities:

Hamsters and Guinea Pigs make good classroom animals. They can be mated in time to have a litter at this time. It has been done in the school system, Emphasize the fact that these animals are born with their eyes open.

Books for Pupils:

Beauchamp, Crampton, All Around Us. Pages 8-28

Films and Filmstrips:

"Farm Babies and Their Mothers" MP 13
"Baby Animals and Birds" FS A36
"Bear Country" (Walt Disney) Wyo. Game and Fish - 31 minutes

Unix IX - Animals From Eggs (2 weeks)

Text: pp. 151-161

Problems: How are other animals born?

Concepts to be developed:

1. Not all animals are born alive.
2. Many animals hatch from eggs.
3. Chickens and ducks are birds.
4. Male and female birds care for their young.
5. Insects hatch from eggs.
6. Toads, frogs and fish do not care for their eggs along with turtles.
7. Turtles hatch from eggs.
8. Many other animals hatch from eggs.

Teaching Procedures:

This unit is taught around Easter and baby chickens or ducks are easy to get. Frog eggs can be found and watched. The cycle of the mosquito and the reason we should kill them. How the crayfish carries her eggs.

Activities: Collect spiders and place in a terrarium until they make their egg case. Watch the cocoons that were collected during the fall walk.

Books:

Beauchamp, Crampton, All Around Us. Pages 10-11.

Filmstrips:

"Birds Hatching" PS 26
"Frogs and Toads" FS 18

Unit X - A Spring Walk, Animal Homes and Earthworms (2 weeks)

Text: pp. 162-185

Problems: What are some of the changes we see in spring? How do some animals that make their homes in woods live? How young robins grow and develop? Why do earthworms come out of their holes when it rains?

Concepts to be developed:

1. In spring buds swell and open.
2. Leaves and flowers come out of buds.
3. Robins and other birds return in spring.
4. Snakes have scaly skin.
5. Snakes do not have legs.
6. Frogs have smooth skin.
7. Robins build their nest near houses.
8. Female robins build the nest.
9. Little robins do not have feathers.
10. Young robins have speckled breasts.
11. Earthworms live in soil.
12. They eat leaves and other things they find on the ground.

Teaching Procedures:

Since our spring weather is different from other areas of the country, the things are limited. We may suggest taking a spring walk to look for old bird nests. Watch for birds like the robins and ducks returning. Prairie dog holes in the fields and some snake holes may be found. All snakes have teeth but poisonous snakes have fangs. The rattlesnake is our most common poisonous snake.

Follow-up: Build an aquarium or terrarium

Filmstrips:

"How to Build an Aquarium"	FS P13
"Keeping an Aquarium"	FS D30

Films:

"Animals In Spring" MP 3
"Camouflage" - State Game & Fish - 10 minutes

Teacher's References: Craig, Gerald S., Science for the Elementary School Teacher.

Unit XI - Plants Make Good Soil (2 weeks)

Text: pp. 186-end

Problems: What makes good soil?

Concepts to be developed:

1. Plants need soil to grow well.
2. Plants get water and food from the soil.
3. Plants must have water, sunshine and food.
4. Broken leaves make good soil.

Teaching Procedures:

Experiment 1: Fill Flower Pots or coffee cans with soil. Fill one can with poor soil or sand and the other one with good soil. Plant the same type seeds in each can and give the same treatment. Seeds like pumpkins, sunflowers, beans or tomatoes. In this experiment the child can see that plants need good soil and that it gets its food from the soil.

Experiment 2: Fill a flower pot or coffee can with soil. Plant the same type seeds in both cans. Place one can in a dark place or closet and the other one out in the sunlight. Give both plants the same treatment leaving the one in the closet there. The purpose for this experiment is to show the child that plants need sunlight as well as food. The plant in the closet will be white and pale looking.

For follow-up activities the children can write the results up about each plant, and what they think happened and why this happened.

Books: Craig, Gerald S., Science for the Elementary School Teacher.
Beauchamp, Crampton, All Around Us. Pages 64-75
Films: "Food For Our Garden" MP 15

Science Kit

Make up a kit of the following items to be used in science. These can all be found in the home:

Safety matches
Compass
Teaspoon and tablespoon
Quart, pint, ½ pint bottles
Medicine dropper
Nails, screws, bolts, washers
File, hammer, pliers, screwdriver
Yardstick
Paint, varnish, paintbrush
Glue
Globe
Soda
Sugar
Paraffin
Iodine

Magnet
Scissors
Measuring cup
Rubber bands
Needles
Nutcracker
Egg beater
Electric plug-ins
Flashlight
Cork
Caster
Starch
Salt
Ammonia

Science Revision Committee - 1964:
Nellie Crews, Chairman, Arp
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Barbara Koester, Eastridge

HEALTH
(Revised 1964)

Ideas, skills, and attitudes to be learned in the health program are based on the child's needs, interests, and abilities. The teacher's edition of Seven or So will help you understand the seven-year-old and plan your program. Teachers should be as familiar with the introduction as with the lesson plans.

Topics should be used at appropriate times. For example: (1) Use pp. 142-144 just before the school dental program; (2) Use parts of Unit III, "On the Playground", early in the fall with the "Back to School" Unit; (3) correlate the "Science All the Year" unit on "The Body" pp. 90-108 with the appropriate health teachings; etc.

Unit I - Back to School (9 weeks)

Correlate introduction with Social Studies.
Follow manual closely-correlate games with physical education
Enriching activities are to be found in teacher's edition which

includes valuable language activities that should be correlated with the language program.

Unit II - Day by Day (9 weeks)

Correlate "I Don't Want a Jacket" with science weather.
Make mobiles (teacher's edition p. 61) for "What Should They Wear".
Do puppet plays (teacher's edition p. 65)

Unit III - On the Playground

Objectives for the Unit:
Things a good sport does in a game.
Ways to keep safe on the playground.
Fire-drill safety rules.
Ways to make a new child at school feel "at home".

Presenting the Unit:

A. A Shadow Game, pp. 88-90
Lesson plan, Guidebook, p. 80.
Directions for Shadow Tag, Nose Tag, and Toes Tag, Guidebook p. 22.
Directions for Tiptoe Tag, Squat Tag, and Color Tag, Guidebook p. 81
Important Social and Physical Health concepts introduced, Guidebook p. 158
Good moving picture to supplement this lesson, "Let's Play Safe" MP 19, pri-int, Visual Aid Bulletin p. 55.

B. What Should Patty Do? pp. 91-93, and How Would Patty Feel? pp. 94-95 Lesson Plans, Guidebook pp. 81-83.
Enriching Activity: Learn song, "Make New Friends", Guidebook p. 82.
Important Mental and Social Health concept introduced, Guidebook p. 158.

C. Teacher Ball, pp. 96-98, and What Would You Do? pp. 99-101 Lesson Plans, Guidebook pp. 84-85.
Summarize things a good sport does in a game.
Important Mental and Social Health concept introduced, Guidebook p. 159.

D. The Firebell, pp. 102-103
Lesson plan, Guidebook, p. 86.
Read "Safety" concept - Guidebook p. 159
Good Filmstrip to supplement this lesson, "Preventing Fires In Your School", FS T17 Pri., Visual Aid Bulletin, p. 55.

E. Safe on the Playground, pp. 104-105
Lesson plan, Guidebook p. 87.
Read "Safety" concept - Guidebook p. 159
Summarize rules for playing with ropes and tagging.

F. What Do You Think? pp. 106-107 and Things You Can Do, pp. 108-110
Lesson plans, Guidebook pp. 88-89
Let individuals and group do the stunts and games.
For other games, see Guidebook pp. 21-22
Check your objectives and summarize the unit.

Unit IV - Things We Want to Know

- Care of fingernails
- Care of the hair
- Sleep
- Toothbrush
- Using your handkerchief
- Wet clothes
- Weight
- Health rules for eating
- Taking baths
- Caring for the ears
- Care of the eyes
- Exercise
- How to sit and stand
- How to keep colds away
- Spitting

Follow teacher's edition.

Health Revision Committee - 1964

Rose Curia, Chairman, Hebard
Eva Hertel, Hebard
Maurine Nelson, Pioneer Park
Sue Roach, Dildine
Irene Moon, Buffalo Ridge

ART

Second Grade

Children in Second Grade should have experience in working with some measure of success in all these mediums.

Do not limit yourself to these suggestions. Try ways of your own. Encourage individuality of expression.

Always explore a medium before you present it.

KNOWLEDGE & SKILLS

Crayon and Chalk	Finger painting	Painting - Tempera	Paper Cutting and Construction	Clay and Papier Mache
1. Various ways of using chalk and crayons. 2. Understanding of: a. Color hues (names) b. Value (dark-light) c. Intensity (dull-bright) d. Texture (rough-smooth) 3. Knowledge of: a. Variety in lines b. Variety in shapes and forms (circle, square, cone, cylinder, triangle, etc.) 4. Ability to work large. 5. Increasing use of center of interest. 6. Ability to fill space pleasingly. 7. Use of chalk as mural background. 8. Use of chalk for large individual pictures and designs.	1. Knowledge of procedures involved. 2. Ability to control medium. 3. Increasing ability to: a. Create pleasing all-over design b. Experiment with free-hand area movement. c. Design to fit space. d. Work large. 4. Greater development of sense of: a. Rhythm b. Repetition c. Balance 5. Increasing ability to express himself through the medium a. Emotionally b. Creatively c. Imaginatively	1. Care of materials and tools. 2. Ability to combine primary colors to produce secondary. 3. Ability to: a. Control medium b. Use variety of brush strokes. c. Fill space pleasingly. d. Paint freely on 18x24" newspaper or newsprint without guide lines. 4. Understanding of contrasting colors (light against dark). 5. Ability to make: a. Tints by adding white b. Shades by adding black. 6. Experimental attitude toward the use of tooth brush, sponge, cotton, etc. in painting and stenciling. 7. Ability to "clean up" efficiently and quickly.	1. Cut or tear on fold. 2. Manipulation by: a. Fringing b. Curling c. Pleating d. Bending e. Folding 3. Construct forms from: a. Circles b. Cones c. Strips d. Tubes 4. Construct forms with: a. Boxes b. Towel rollers c. Bags d. Paper plates, etc. 5. Ability to cut and use single stencils.	1. Ability to man pulate water base clay. 2. Ability to mod from whole. 3. Care of clay: a. How to stor b. How to keep at good wor consistency. 4. Ability to produce simple, forceful forms not easily broken. 5. Ability to wor from the whole. 6. Understanding the processes smoothing, drying and decora ing. 7. Knowledge of p cedures in wor ing with papie mache. 8. Ability to wor over newspaper and clean up quickly.

SUGGESTED PROCEDURES

Crayon and Chalk	Finger Painting	Painting - Tempera	Paper Cutting and Construction	Clay and Papier Mache
1. Experiment freely with use of side, point, and end. 2. Vary pressure to make dark and light. 3. Try different kinds of lines with side, etc. a. Circle b. Straight c. Wavy d. Scallop e. S-curve f. Zig-zag g. Spiral 4. Experiment with different textures by crayoning on paper placed over screen, corrugated paper, rough cloth, sand paper, etc. 5. Demonstrate: a. Crayon resist b. Crayon etching	1. Protect working area with newspaper. 2. Protect children's clothes with aprons or old shirts. 3. Use one full sheet of newspaper folded in middle to cover desk. 4. Write name on dull side of paper 5. Wet dull side, then shiny side. 6. Add little puddle to center of paper. 7. Sprinkle paint in and around "puddle." 8. Use flat of hand to spread paint. 9. Have children do dusting, stirring, sawing, etc. actions in air first to get idea of big free movements. 10. Press with warm iron, or under pile of books, when dry.	1. Set up painting centers for 4 children each (desks shoved together, large table or floor are good working surfaces). 2. Have paints mixed in jars with tight fitting lids. Four colors to each group. Half-inch varnish brush for each color. 3. Use newspaper, wall paper or 18x24" newsprint for painting. 4. Protect working area with newspapers. 5. Arrange for "clean-up" before starting painting. 6. Have tempera mixed to consistency of thin cream. 7. Encourage experimentation with medium before expecting a child's best efforts. 8. Demonstrate use of: a. Toothbrush b. Sponge c. Stick printing materials 9. Use thin tempera over crayon.	1. Cut on fold by always holding on fold. 2. Show how to: a. Fringe b. Curl c. Pleat d. Weave e. "Accordian" fold 3. Cut free-hand forms and assemble to make animals, toys, people, etc. 4. Use whole, half, and quarter of simple geometric shapes to assemble into various forms. Add ears, tails, wings, horns, whiskers, etc. 5. Build animals and objects out of various size boxes, towel rollers, etc. 6. Use colored magazine pages and newspaper for experimentation.	1. Protect workin areas with newspapers 2. Mix clay to co sistency of put 24 hours before use. 3. Mix 15 lbs. fo 30-35 children. 4. Show how to: a. Roll on pape if clay is t wet. b. Smooth clay wet finger t prevent crac 5. Demonstrate: a. Pinching out shapes from whole ball. b. How to make "free form" dishes. c. How to cemen one piece to another with water. d. How to make coils for bowls. e. How to make decorate til 6. Papier mache: a. How to wrap crushed paper form with strips of newspaper dipped in paste.

RECOMMENDED ACTIVITIES

Crayon and Chalk	Finger Painting	Painting - Tempera	Paper Cutting and Construction	Clay and Papier Mache
1. Correlate with other subjects by making: a. Murals b. Booklet covers c. Class books d. Individual pictures e. Individual booklets 2. All-over designs or border designs for booklet covers, etc. 3. Crayon resist pictures (thin wash of tempera over heavily crayoned picture). 4. Imaginative birds, flowers, fish, etc. done with chalk on large (12x18") paper. 5. Design on cloth, press to set crayon. 6. Use crayon stencil for booklet covers, cards, etc.	1. Use pressed finger-painting for: a. Booklet covers b. Covers for boxes or cans c. Cut in strips for weaving. d. Scenery, trees, flowers, etc. for mural. e. Use as matting for other pictures. f. Shellac for table mats.	1. Make large (18x24") individual pictures. 2. Use as background for mural. 3. Paint clay and papier mache objects. 4. Do spatter-painted booklet covers and cards for special occasions. a. Make stencil out of heavy paper. b. Have tempera the consistency of cream. c. Pin pattern on suitable background. d. Pull toothbrush that has been dipped in paint toward you over a piece of screen. 5. Use tempera as a wash over crayon picture. 6. Do stick printing with spools, corks or carrots that have been notched, scalloped, etc. 7. Use sponge painting to decorate wrapping paper.	1. Assemble figures with geometric shapes: circle, head; square, body; rectangles, legs, arms. 2. Cut on fold: a. Christmas trees b. Valentines c. Clowns d. Flowers, etc. 3. Make single or double accordian folds with strips of paper for animal legs, bodies, etc. 4. Make paper sculpture flowers, figures, animals by fringing, folding, curling, etc. 5. Use paper sculpture to: a. Decorate masks b. Make Christmas tree decorations. c. Build picture for bulletin board. d. Make simple hats or costumes for dramatization. 6. Make "Our Helper" dolls out of paper sacks. 7. Use paper strip weaving for booklet covers, May baskets, etc. 8. Make stick puppets.	1. Correlate with other subjects b making: a.Figures b.Animals c.Dishes d.Tiles 2. Use clay t model obje for dioram 3. Make papie mache fing puppets to dramatize stories or social stu 4. Make papie mache Chri mas tree o aments, Ea eggs,anima *********** Art Committee Maurine Nelso Florence Laubman Leah M. Bain Esther Petch

Finger Painting

1. Materials to use:

   a. Finger paint paper or shelf paper cut to convenient length
   b. Finger paint
   c. Newspapers
   d. Cans of water
   e. Sponges
   f. Aprons or old shirts to cover clothing

2. Teacher preparation before class:

   a. Cut paper to desired size
   b. Fill cans with water
   c. Arrange desks in groups of four or five
   d. Assign a leader for each group.

3. Procedure:

   a. Discuss the various types of movements; how to use the thumb, palm, arm, fingers side of hand. Imaginary strokes may be made in the air to enable children to get freedom of movement.
   b. Each child writes his name on the dull side of the paper. He wets the dull side first by squeezing water from a sponge onto his paper and using his hand to spread it over the surface. The paper is turned to the shiny side, wet again, and a little puddle left in the middle of the paper. The paint is sprinkled all over the surface, and worked smoothly over the paper. Each child is encouraged to experiment with various parts of hand, and to create a truly original design.
   c. When the picture is completed, it is put on newspapers to dry. Pressing with a warm iron helps the appearance.
   d. If the school room is not equipped with flat-topped desks, the children might take turns working on a large table.

Paper Sack Doll

Materials needed:

Small sack
One medium-sized sack
String
Newspaper
Oak Tag
Crayon or paint for decorating

Procedure:

Stuff the small sack with crumpled newspaper to form the doll's head. Gather and staple. Cut the bottom out of the large sack, spread it out to its full double width. Design dress with crayons or tempera. Cut down side folds a short way for arm slots. Gather cut end, and tie or staple on to first sack just below the head. (Narrow ribbon or crepe paper strip may be used around neck for decoration.) Cut arms from oak tag. Slip through fasteners, allowing arms to move up and down. By shaping the skirt around the doll will stand without legs. Paint features.

PHYSICAL EDUCATION PROGRAM
Kindergarten through Third Grade

Growth is a continuous process - an emerging - an unfolding. At no time does a child abruptly complete a particular stage of development and begin the next. Neither is there a time when all children in a group are at exactly the same stage of growth.

Any classification into groups along the route of growth is artificial. The following chart is merely a device to help give a picture of activities that seem to suit the changing needs of children. The subdivisions and classifications used serve as convenient labels for periods of growth through which children gradually move, each child holding to a path that is his alone.

What They Are Like	What They Need OPPORTUNITIES	What To Do
Their large muscles (trunk, legs, arms) are more developed than the smaller muscles (hands and feet).	To experience many kinds of vigorous activities that involve many parts of the body. To engage in many developmental activities for small muscles.	Activities such as: Hanging, running, jumping, climbing, dodging, or throwing at an object. Bean Bag Toss, Jacks, Bouncing Balls, Hopscotch, O'Leary.
They have a short attention span.	To engage in many activities of short duration.	Choice of activity where child can change frequently and activities that can be started quickly, such as: Magic Carpet, Pincho, Hill Dill, and stunts.
They are individualistic and possessive.	To play alone and with small groups. To play as an individual in larger groups.	Individual activities, such as: Throwing, catching, bouncing, kicking, climbing stunts, running, hopping, skipping, building blocks, jumping. Dance activities which allow for expression of self, such as clowns, aviators, firemen, cops, aeroplanes. Activities which may use small numbers of children such as Stride Ball, Cat and Rat, Hill Dill, Cowboys and Indians, Tag. Singing games such as, Looby Loo, Bluebird, Sing a Song of Sixpence.

What They Are Like	What They Need OPPORTUNITIES	What To Do
They are dramatic, imaginative, and imitative.	To create and explore. To identify themselves with people and things.	Invent dance and game activities, such as cowboys, circus, Christmas toys; work activities such as pounding, sawing, raking, hauling. Other play activities, farmers, postmen, grocers, elevators, bicycles, leaves, scarecrows.
They are active, energetic, and responsive to rhythmic sounds.	To respond to rhythmic sounds such as, drums, rattles, voice, nursery rhythms, songs, music.	Running, skipping, walking, jumping, galloping, dodging, swimming. Singing and folk games such as, Oats, Peas, Beans and Barley Grow, Farmer in the Dell, Nixie Polka.
They are curious and want to find out things.	To explore and handle materials with many types of play.	Using materials such as, balls, ropes, stilts, bean bags, bars, ladders, trees, blocks. Games and activities such as, hiking, Run Sheep Run, Huckle Buckle Bean Stalk.
They want chances to act on their own and are annoyed at conformity.	To make choices, to help make rules, to share and evaluate group experiences.	Variety of activities with minimum of rules, such as Center Base, Exchange, Midnight and Red Light. Make-up activities, dances and games.
They are continuing to broaden social contacts or relationships.	To cooperate in play and dance, to organize many of their own groups.	Group games, such as simple forms of Dodge Ball, Kickball. Dance and rhythmic activities, such as Gustaf's Skoal, Dance of Greeting, Bow Belinda.
They seem to be in perpetual motion.	To play many types of vigorous activities.	Running, jumping, skipping, galloping, rolling.

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ARITHMETIC ENRICHMENT

Second Grade

1. Double Solitaire

Use: Provides practice in reviewing addition basic facts for 10 to 18 (basic facts whose sums are 10, 11, 12, 13, 14, 15, 16, 17 or 18) for two children.

Materials: One set of 9 cards (blue, red, green, or pink) about 2½x3" (one 3x5" card makes two of them). Number these cards from 10 to 18 with large numerals. These are called "key cards". One set of 90 "solitaire cards" (white) about 1½x2½" (one 3x5" card makes four of them) for each player. Write the following on them:

18 cards with the numeral	9	8 cards with the numeral	4
16 "	8	6 "	3
14 "	7	4 "	2
12 "	6	2 "	1
10 "	5		

To Play: Give each child a set of 90 solitaire cards and place the set of 9 key cards on a table between the players. Tell them to shuffle each set of cards, but to keep each set separate.

Each child should place in front of him 48 of his solitaire cards. These cards should be placed face up in rows, 8 horizontal and 6 vertical. Both players put aside the remaining 42 solitaire cards. Three of the key cards should be turned up and placed where both players can see them.

Each child then finds pairs of solitaire cards whose sums are equal to numbers on the key cards. He places one card of each pair on top of the other. For example, if the key cards are 10, 15, and 18, a player can combine cards whose numbers, when added, make 10, 15, or 18.

Each child plays independently and uses only his own cards. When the two players have made as many pairs from their cards as they can, they count the number of pairs. The winner is the child who has more pairs.

2. Get - A - Row

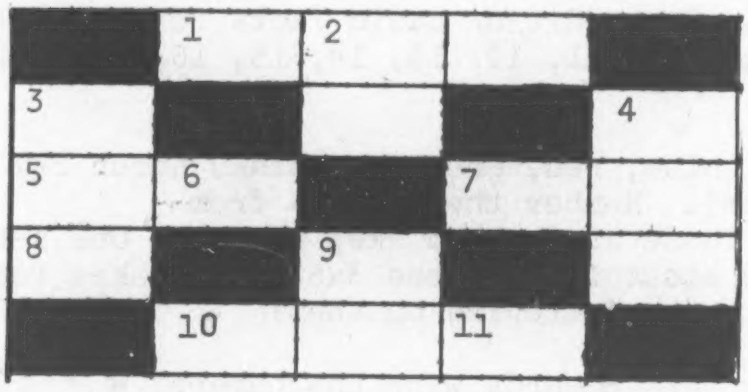
Use: Practice on the basic facts for 6 to 10
Number of Players: Any number.
Materials: A master card for each player

A master card should be 5x5" and divided into 25 squares. No two cards should have the same arrangement of basic facts, nor should any basic fact be repeated on a card. Do not include more than five basic facts for the same sum on any one master card. Answer cards that are slightly smaller than the squares on the master card should be prepared. Eacy player will need 25 answer cards - 5 for each of the number 6-10.

3+3	2+4	4+4	4+5	+7
1+6	5+2	5+1	7+2	+5
3+5	2+5	6+2	4+2	+7
8+2	1+9	4+3	3+6	+5
4+6	3+4	2+6	8+1	+1

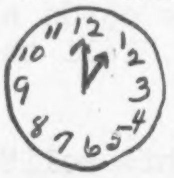
Each set of 25 answer cards should be put in an envelope. Abler pupils can help make these. Play it as you do Bingo.

3. A Cross-Number Puzzle

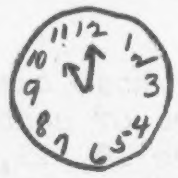


Across

1. What number comes after 110?
3. What time does this clock say?

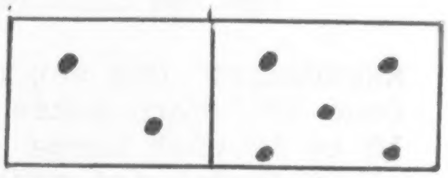


4. How many tens are there in 40?
5. What time does this clock say?



7. When counting by 5's what number comes after 20?

9.



This is a number picture of what number?

10. When counting by 2's what number comes after 150?

Down

2. How many eggs in a dozen?
3. What number comes after 117?
4. What three numbers come after 3?
7. 1 + 1 = ?
9. What number comes after 74?
10. What is 6 take away 5?
11. What is 7 take away 5?

4. Cafeteria Line

When children have had some practice with column addition and the addition of money, they will enjoy playing Cafeteria Line.

You will need a number of 4x6" cards, each identified by a number. On each card various foods that might be bought for lunch should be listed with the price of each. At the bottom of each card, indicate the price of an imaginary meal. This amount should not exceed one dollar.

Let the child select a card. Explain that he is to see how many different meals he can buy (made up of foods listed) that do not cost more than the amount written at the bottom of the card. Be sure he understands that each meal must be a sensible, well balanced meal.

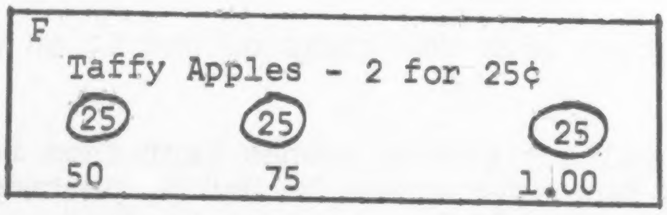
Have the child write the number of the card on his paper, and then write the various menus that he selects, each in a column, with the price of each food item opposite it. Have him find the sum of each column to find the price of each meal.

The activity may be extended by asking children to figure out how much change they should get from the amount of money they present for their meals. Amounts of money to be presented, such as \$.50, \$.75, \$1.00, \$5.00, could be included on the cards at this time. Children should be instructed to subtract the cost of the meal they select from the amount of money indicated on the card.

5. Store Solitaire

Playing store by himself with ads pasted on cards can provide a pupil with considerable practice in making change for one dollar.

Materials for this activity may be prepared by the children. Let them look in local papers for ads that contain lists of familiar articles for sale. Tell pupils to pick out lists of articles priced at less than one dollar. (Items sold in groups of so much; for example, 3 bars of soap for 22¢, are acceptable). Have the children cut out the lists to fit 4x6" cards and paste them down, leaving room to identify each card with a letter or a number.



The child can select a card. Have him write the number of the card on his paper. Explain that he can play store all by himself by pretending to be the storekeeper. The card he has chosen shows what he has to sell. He is to imagine that each person who comes to his store will buy one of the items listed and will give him a dollar to pay for it. (Items listed in groups are to be treated as a single purchase.)

Tell the pupil to write the name and price of each article he "sells" on his paper. Below the article, he is to make circles to represent the coins he would use in making change for a dollar. He should put the proper figure in each circle to show what coin it represents (1 for penny, 5 for nickel, etc.). Under each coin that he has drawn for his change, have him write the number that he would say in counting out the change to his customer.

6. Buzz Counting

Buzz counting is a game that has been used for a number of years, but is still popular as it serves an interesting way to count by 2's, 3's, 4's, 5's.

It is played as follows: The teacher may start by saying, "In buzz counting today, 3 is IT. Who wants to be first?"

The child who is starting the game says, "One, two, buzz, four five, buzz." If the child says "six" instead of buzz, he is out of the game, for all multiples of the IT number are replaced by buzz. Others then try.

7. What's the Score?

Teachers can tell this story to the class or write it on a card for a child to work on by himself.

The story: A boy was playing dominoes with his father. They kept score by making marks on a sheet of paper. The score sheet showed the following:

Bob	Father
/////	/////
////	/////
	////

Can you read the boy's and his father's scores?

If no child recognizes that each stroke represents 5 points, the teacher may give the hint (or write it on the card) "There is a difference of 25 points between the scores."

8. How Many Stones?

Use the following story with the class or put it on a card for a child to use:

A boy who liked to collect pretty stones kept them in a large bucket. He kept a record of how many stones he had by putting on the table beside the bucket a large stone for every hundred stones he had, a middle-sized stone for the tens, and little stones for the one left over. There were three large stones, seven middle-sized stones, and four small stones on the table. How many stones did the boy have? (Answer: 374)

9. Questions for the Bulletin Board

Below are listed a few questions that could be placed on the bulletin board, using the heading, "Question of the Day":

1. What is the largest number that can be written with four figures?
2. What is the largest number that can be written with three figures?
3. The speedometer on the car shows 1999. With another mile, what figures will show?
4. What word will the number 317 spell when you turn the paper it is written on upside down?
5. Jack said he could arrange 8 fours so that the total would equal 500. He wrote the first 5 fours this way:
   44
   444
   Where should the other three fours be written?
   Solution: 44
   444
   4
   4
   4

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SUPPLEMENTARY SCIENCE

It must be clearly understood by all who use this guide that it is to be used as supplementary over and above the regular established textbook presentation of science in the elementary grades. The only way a person can teach properly in any subject is through a proper organized sequence of processes and activities as presented in a basic series of textbooks.

This guide is intended to give the child who has successfully completed the basic requirements some additional stimulation to learn more about those facts and to expand on them.

The following attitudes and objectives should be kept in mind at all times when pursuing the subject of science, either at a regular or an enrichment level. Science should be approached with the following attitudes clearly in mind:

1. A desire to know more about one's surroundings.
2. A belief that when something happens there is a cause that can be explained.
3. A sincere belief of the falsity of superstition.
4. A knowledge that what is true does not change, but that one's ideas of what is true change as we gain more and more knowledge.
5. A hesitancy to accept as fact anything not supported by proof.
6. A determination to plan carefully, not to just experiment or work blindly.
7. A pride in accuracy in all activities and observations.
8. A willingness to consider all relative evidence before coming to a conclusion.
9. A persistence to make many observations and proofs before coming to any final decision, rather than basing a decision on just a few.
10. A desire to do one's observing and experimenting, but a willingness to base that activity on the work of other scientists.
11. A flexible or open-minded attitude that will permit a change of opinion if newer evidence shows that it is wrong.
12. A respect for another person's point of view.
13. A determination to be objective no matter how strong your likes and dislikes.

The teacher of science has a tremendous responsibility in building the foregoing attitudes. He is essentially the guide, leader, consultant and resource person for every child at every learning level. This does not mean that the teacher must have an unlimited knowledge of the subject or methods, but that he have the same type of scientific attitude he expects from the children.

Blough suggests a few objectives for teachers to keep in mind:

1. To help children form their own ideas or generalizations that will help them settle their own problems.
2. To help children grow in ability to solve problems effectively.
3. To help children learn by doing, seeing and feeling rather than strictly by reading, listening and accepting.
4. To help children form a scientific attitude and use it.
5. To help children develop an appreciation and interest in their surroundings.

This guide has been set up as enrichment project work that an individual may undertake. It is pointed toward individual activity rather than teacher-directed group activity. These activities are arranged to supplement the text-suggested activities at each grade level; however, it should be clear that they are not limited to that level and time. They should be undertaken whenever the interest and desire are intense enough to warrant the effort.

In project work the gifted child must be challenged by problems which require him to think and seek information. He must be given an opportunity to read widely, to work with difficult materials, to exhibit independence, to demonstrate insight and share his findings with the group.

These activities should be approached with the attitude that the child select his own activities and pursue them in his own way. It is hoped that with the readiness established by doing the regular class work, the permissiveness used here may set the proper emotional tone to cause a child to learn much. A proper student-teacher relationship should be maintained, however, so that the teacher may give behind-the-scenes help through questions, suggestions, and securing of materials.

WEATHER

I. Objectives

   A. To develop an awareness that life on the earth is dependent upon the energy of the sun.
   B. To help the child realize that the earth and its life are greatly affected by the changes in the atmosphere which surrounds the earth.
   C. To help the growing child to understand his environment, to relate himself to it, and to live happily in that environment.

II. Concepts to be Developed (47) pp. 26-27

   A. The sun usually cannot be seen on a rainy day. The day is dark, clouds are gray, and the rain is falling.
   B. Wearing wet clothing may lead to illness.
   C. Wearing protective clothing of plastic or rubber keeps us dry in wet weather.
   D. On a sunny day, the sun shines and warms the earth. There are few clouds.

E. We see shadows on a sunny day. When something blocks the light, a dark area is formed in the shape of the thing that blocks the light.
F. Shadows may be larger or smaller than the object which blocks the light.
G. On cloudy days the sun is still shining, but clouds form between the sun and the earth and block the direct rays.
H. Wind can make things move.
I. Wind is air in motion. We can produce wind by putting air in motion.
J. Air may move at various speeds. Slowly moving air is a gentle breeze; air moving rapidly becomes a strong wind.

Activities and Experiments (171) pp. 82-99	Understandings to be Developed
1. Collect pictures showing different kinds of weather	
2. Throughout the winter months keep a record of temperature of the days on which snow falls.	1. Snow forms when the air is freezing cold.
3. When a snowfall stops, measure the depth in several places in an open area. Fill a container to the same depth. Allow the snow to melt. Measure the depth of the water to find out how many inches of snow are equal to an inch of water. Check your findings by inquiring of the weather bureau or with your teacher's help, consult books of reference.	1. It takes an average of 10 in. of snow to equal an inch of rain.
4. Fill a teakettle half full of water and have some one heat it. Notice the cloud of white which forms near the spout, but not exactly upon it. This is a cloud caused by the cooling of the steam from the teakettle.	1. Water gets into the air through evaporation. 2. Heat helps water to evaporate. 3. Clouds are formed when moist air containing much water vapor is cooled. 4. Clouds are made up of tiny drops of water.
5. Take two similar open containers and put the same amount of water in each. Put one in a warm place, and one in a cool place. Which container loses water faster? Tell why.	1. Heat causes water to evaporate and to become invisible water vapor in the air.
6. Find places at home where water condenses from the air. (Examples: steam and drops of water on kitchen windows, drops of water on bathroom mirrors, cold water on faucets or water pipes.)	1. Tiny drops of water form together to make larger drops. Rain is formed from the tiny droplets of water in clouds.
7. Compare a damp day with a dry day. Tell ways in which they are alike. Tell ways in which they are different.	1. Dampness is due to a larger amount of water vapor in the air. 2. The amount of water vapor in the air is called humidity.

8. Test clothing of different materials, such as rubber, leather, cotton, or plastic to know which is waterproof. Place a cotton handkerchief in each of these: a leather shoe, a cotton shirt, a plastic rain hat, one of a pair of rubbers. In which will the handkerchief remain dry? (73) p.14	1. Rubber or plastic material keeps out water better than cotton or leather. 2. Choosing clothing suitable to the weather helps to keep us well.
9. Collect and display pictures to show different kinds of clouds.	
10. Make a weather chart showing a record of clouds (many, few, high, low): wind direction and speed (light, strong, very strong); temperature (hot, cold, cool, etc.)	1. Weather comes in many varieties.
11. Bring pictures or news items from the newspapers showing weather conditions or storm damage.	1. To help the children become aware of happenings in the world around them.
12. Take the temperature of a body of water out of doors. Take the temperature of soil in the sun. Take the temperature of soil under the rock. Where was the soil the warmest? Where was the temperature the coolest?	1. To develop the understanding that the sun gives heat. To develop an understanding that solid things on which the sun is shining gets warmer and stays warm longer than do liquid things.

III. Evaluation (73) pp. 36-37

A. Are the children more aware of the changes in the weather? Do they comment on it more frequently and with greater accuracy of expression?

B. Do the children show interest in repeating the experiments in the unit? Do they show increased skill and confidence in handling materials? Do the more imaginative children suggest variation in the experiments?

C. Do the children bring in evidence of continued interest in the weather? (Examples: Pictures or drawings of weather conditions, news pictures of storms, and weather reports.)

D. Do the children resist less to being properly dressed for the weather? Do they show an awareness that rules of health and safety are for their own protection and not just arbitrary adult commands?

SUGGESTED ACTIVITIES FOR ENRICHMENT OF SCIENCE TO ACCOMPANY STUDY GUIDE

I. The Sky (53) pp. 32-48

A. Collect pictures for scrapbook or bulletin board showing different kinds of clouds.
B. Make drawings or paintings showing different kinds of clouds.
C. Make a Picture to show how a cloud passes across the sun.
D. Read to find stories or poems about clouds.

II. The Earth (53) pp. 49-64

A. Get some scales on which you can be weighed. Weigh yourself and five of your classmates. Write down your weights. How do they differ? When you say that you weigh 45 pounds, you mean that the earth's gravity has that much pull on you.

B. Jump into the air. Throw a ball into the air. Sail a paper airplane into the air. Explain why objects sent up into the air will return to earth.

C. Drop a flat sheet of paper from a reasonable height. Compare the speed of fall with that of a sheet of paper crumpled into a ball. How can you explain that the pull of gravity comes from the earth and not from the sun?

D. Read the story, "The Pull of the Earth", in Science Under the Sun, beginning on page 110.

E. Look at a place where a basement is being dug. Notice that in some places a layer of rock can be seen. Gather some pieces of the rock. Examine them. Bring them to school and explain why this rock is not worn smooth.

III. Plants and Animals

A. Watch for leaf buds and observe them opening into buds. You can hurry this process if you gather some branches and place them in a vase of water in a sunny spot.

B. Gather some pussywillow branches and place them in water. Watch the leaves and roots develop.

C. Plant and care for a tulip bulb or other bulb. When it is ready to bloom, take it home to Mother as a gift.

D. Make a chart to show different stages of a plant from planting of seeds until producing of fruit or vegetable.

E. Gather wild seeds in the fall and group them into "hitch-hiking seeds" or "fly-away seeds".

F. Bring pictures of animals to show which animals are useful to man.

G. Bring pictures to show some animals that are harmful to man.

H. Take a walk in the park and watch for birds. Collect or draw pictures to show the birds seen on the trip. Write a story or tell about the nesting habits of birds near your home.

I. Bring in a caterpillar. Be sure to bring it on a leaf of the plant on which you found it so you will know what food it eats. Take care of it and watch it change through its various stages.

IV Machines

A. First, try to push a box of stones on the bare ground; second, try pushing it on the sidewalk; third, try to push it on rollers. Tell why it was much easier to move when the box was placed on rollers.

B. The above experiment may be varied by trying different kinds of ground, such as rough ground, stony ground, gravelly ground, muddy ground, and a grassy plot. Tell in your own words what made it stick.

C. Pull a loaded sled over ice, and then over bare ground. On which did the sled move more easily? Tell why.

D. Oil a squeaky wheel on a bicycle or tricycle or wagon. Did the squeak disappear? Explain why. Does the wheel move more easily now?

E. Find out and report to the class ways to properly care for tools and machines.

F. Make a list of safety rules for using tools at home and school. Find pictures to illustrate each rule.

Evaluation

Evaluation is an important aspect of the science program. Tests on recall of subject matter are common, but we need to give increased attention to measuring growth

in ability to use scientific method of problem solving;
in the use of scientific attitude;
in appreciation of and interest in, the natural environment.

Children, even in the first grade, are able to do a few activities and experiments independently; however, a dislike for being tested on their achievement may inhibit their interest in attempting such experiments. Very often teachers can fairly accurately check on learning by visiting with the child and through informal class discussions.

The children may wish to plan a culminating activity to show the results of their work to their parents or at a school assembly. The children, to a large extent, should decide upon the activity and make the necessary preparations for themselves. The teacher should be ready to assist as guide, leader, consultant, and adviser. The children might plan a series of easy experiments, perform and explain them; plan and draw a series of large pictures that show the importance of the ideas they have learned; or write stories that illustrate the generalizations they have discovered.

Children might evaluate their learning by asking themselves such questions as these:

1. What things did we do best?
2. How could we have improved our way of working?
3. What did we do to be sure that our experiments told us true things?

A point for teachers to remember: Decide what it is you hope to accomplish in teaching science, keep it in mind, keep checking to see that you are on the right track, and keep evaluating to find out how close you are coming to your goal.

Let these purposes be those of the pupils, and let them help with the plans for accomplishing these objectives.

The results of evaluation are helpful in that:

1. They assist the teacher to understand each child and his problems.
2. They help the teacher plan additional learning experience.
3. They enable a child to measure his own progress and result in a greater desire for further learning.

The Science Activity Center

A science activity center in the classroom is a stimulating and worthwhile undertaking. It should be colorful and inviting; a place where children can do something about science. It should include three general areas: a work surface, a book shelf, and display facilities.

The work surface is a table, or perhaps several orange crates together. There might be materials at hand for repeating a recent experiment, a science wonder box, or materials for making a chart, diorama, or models. The character of the work surface will change often.

The book shelf will have not only books about the subject being studied at the time, but also items to arouse curiosity and to promote new interests.

The display facilities should provide space for properly displaying such items as a caterpillar or cocoon, sea shells, a collection of pretty rocks, or a model. It must also provide vertical space for displaying charts, pictures, etc. Teaser tags with provocative questions may be attached to appropriate objects. "Which of these are enemies of another?" (Starfish eat oysters) and "How many wheels can you find in this room?", are examples to spark the interest.

The Science Activity Center should be a place where children can feel free to go for any of these purposes after completion of their regular classwork

to perform a new experiment,
to repeat an experiment,
to perform an experiment that someone else had demonstrated,
to observe the results of an experiment,
to examine and read science material,
to study charts and material on the bulletin board, or
to add new material to the collections, exhibits, or bulletin board.

Should the science corner be a gem of art, well-balanced, and a thing of beauty, or should it be a genuine product of dirty little hands and inquisitive minds? One clever teacher divided her bulletin board space into three sections: The Gloating Board, for formal culminating types of display; the Gleaming Board, whose purpose was to keep fresh in the minds of the children old science learnings out of past experiences; the third, the Glumble (or Jumble) Board, for odds and ends, unrelated, but of great interest to the class.

If materials are changed frequently and the orderliness, attractiveness and informality do not overshadow its usefulness, the science center will give every child the opportunity of contributing and participating in class interests and activities.

SCIENCE VOCABULARY

Science words begin to have meaning only when they are used in connection with experiences, experiments, and activities that are interesting and real to the children. Vocabularies grow out of experiments and experiences. From the activities planned in these units of study, these and other words are important and indicate growth.

First Grade

- air
- animal
- autumn
- baby
- blow
- boil
- clothes
- cloud
- cocoon
- collection
- day
- earth
- earthworm
- experiment
- feather
- garden
- ground
- grow
- home
- light
- magnet
- moon
- morning
- mountain
- night
- noon
- pinwheel
- plant
- question
- rain
- rock
- rough
- sand
- seashore
- seed
- shadow
- snow
- soil
- spring
- star
- summer
- sunshine
- tame
- things
- water
- weather
- wheel
- wild
- wind
- winter
- work
- young

Second Grade

- ants
- aquarium
- balance
- bubble
- burning
- caterpillar
- cell, dry
- changes
- color
- direction
- electric
- electricity
- engine
- evaporate
- flower
- fruit
- grass
- height
- ice
- insect
- leaves
- lever
- machine
- magnifying glass
- mechanical toy
- moth
- motor
- observation
- prism
- pulley
- rainbow
- ray of light
- roots
- scales
- seasons
- siphon
- stalk
- steam
- storm
- switch
- temperature
- thermometer
- trips
- ventilation
- weed
- weight
- year

SCIENCE MATERIALS

1. Tools
2. Heat source
3. Magnets
4. Magnifying glass
5. Room thermometer
6. Dry cells
7. Copper wire
8. Bottles
9. Glass plates
10. Jars, assorted
11. Electric bell
12. Compass
13. Candles
14. Flashlight
15. Stopper, cork
16. Pans and trays
17. Dishes
18. Glass tubing
19. Iron filings
20. Rubber tubing
21. Test tubes
22. Glass tumblers
23. Balloons
24. Electric switches
25. Funnels
26. Rubber stoppers
27. Tin cans
28. Flower pots
29. Seeds, bean, pea
30. Terraria, aquaria
31. Iodine
32. Alcohol, denatured
33. Salt, table
34. Baking soda
35. Lime, slaked
36. Sugar
37. Vinegar
38. Paraffin, sealing wax
39. Cloth, silk, wool
40. Needles, assorted
41. Prism, triangular
42. Wire, iron
43. Balance, spring
44. Balls, large, small
45. Boxes, assorted
46. Cardboard
47. Cord or twine
48. Flask, Pyrex
49. Globe, world
50. Lamp chimneys
51. Safety mat
52. Flash bulbs
53. Electric sockets
54. Microscope & slides
55. Mirrors
56. Metal, copper sheet
57. Paring knife
58. Barometer
59. Bolts
60. Clay, modeling
61. Teakettle
62. Electric lamp cord
63. Pulleys
64. Machines, toys
65. Lumber
66. Iron stands, clamps
67. Electric motor
68. Metal cup
69. Carpet tacks
70. Screws
71. Rubber rod or comb
72. Bicycle pump
73. Litmus paper
74. Beakers
75. Cellophane
76. Clinical thermometer
77. Starch
78. Animals in school
79. Animal cages
80. Potted plants
81. Bulbs, flowers
82. Ant house
83. Household ammonia
84. Rock collection
85. Tuning fork

FILMS AND FILMSTRIPS

Plants and Animals

See pages 58-63 (Science-Nature Study) in Catalog of *Audio-Visual Instructional Materials*, Cheyenne Public Schools, September 1961

The Earth

FS - J35 *How Things in the World Change* (primary, intermediate, junior high)
FS - J40 *Things in the World Change* (primary, intermediate)
MP - 40 *Earth, Its Rotation and Revolution* (primary, intermediate)

Adjusting to Environment - Inventions

FS - H2 Story of Thomas A. Edison (primary, intermediate)

Air Travel

FS - P46 *Seeing the Airport* (primary, intermediate)

Energy

FS - E18 *Magnets* (primary, intermediate)
MP - 23 *Michall Discovers the Magnet* (primary, intermediate)

Chemical and Physical Changes

FS - J35 *How Things in the World Change* (primary, intermediate, junior high)
FS - J40 *Things in the World Change* (primary, intermediate)

The Heavens

FS - K38 *Night and Day* (primary, intermediate, junior high)

Weather

FS - A11 *Air*
MP - 1 *Air Around Us*
FS - J37 *We Learn About Weather*
FS - J38 *Changes in Weather*

Film Sources:

Cheyenne School Audio-Visual Office
Union Pacific Railroad
United Air Lines
State Health Department
State Game & Fish Department
Liggett & Myers Tobacco Company
Wyoming Travel Commission
Cheyenne Chamber of Commerce
Carnegie Public Library

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62. Exploring Science Two
63. Exploring Science Three
64. Exploring Science Four
65. Exploring Science Five
66. Exploring Science Six

Ginn and Company (Craig, and others)

67. Science and You, Primer
68. Science Near You, Grade One
69. Science Around You, Grade Two
70. Science Everywhere, Grade Three
71. Discovering with Science, Grade Four
72. Adventuring in Science, Grade Five
73. Experimenting in Science, Grade Six

Heath and Company (Schneider and Schneider)

74. Science for Work and Play (Grade One)
75. Science Here and Now (Grade Two)
76. Science Far and Near (Grade Three)
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78. Science in Our World (Grade Five)
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J. B. Lippincott Company (Smith, Clark, Henderson, Jones)

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81. Under the Sun, Book Two
82. Around the Clock, Book Three
83. Across the Land, Book Four
84. Through the Seasons, Book Five
85. Beneath the Skies, Book Six

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The Macmillan Science Life Series, 1959

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88. Book Three "
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95. In Your Neighborhood (Grade Three)
96. How and Away (Grade Four)
97. Far and Wide (Grade Five)
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99. We Wonder, Pre-primer
100. We Ask, Primer
101. We Look and Listen, Grade One
102. Seeing New Things, Grade Two
103. Finding Answers, Grade Three
104. Exploring Together, Grade Four
105. Doing Experiments, Grade Five
106. Solving Problems, Grade Six

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(Dowling, Freeman, Lacy, Tippett)

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108. Seeing Why, Grade Two
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110. Explaining Why, Grade Four
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